Tractors

Power and Performance

From 1917 to the present day

Tractors

HANOMAG

Tractors

Contents

Introduction 8

The greatest Tractors from A to Z 12

Advance-Rumely 14
Allgaier 16
Allis-Chalmers 18
Bautz 20
Belarus 22
Bolinder-Munktell/Volvo 24
Bührer 28
Case 32
Challenger 40
David Brown 42
Deutz 44
Eicher 60
Fahr 70
Fendt 74
Ferguson/Massey-Ferguson 84
Fiat 92
Fordson 96
Güldner 102
Hanomag 106
Hatz 116
Hela 118
Holder 122
HSCS 124
Hürlimann 126
Hummel 130
IFA 132
International Harvester 136
IHC Neuss 144
JCB 150
John Deere 152
Kramer 166
Landini 170
Lanz 172
MAN 194
Massey-Harris 200
McCormick 202
Minneapolis-Moline 206
New Holland 208
Normag 212
Nuffield 216
Orenstein & Koppel/MBA 218
Porsche 220
Renault 224
Same 228
Schlüter 230
Steyr 238
Ursus 242
UTB 244
Vierzon 246
Zetor 249
Zettelmeyer 252

Index 254

Picture credits 256

LANZ
BULLDOG

From the steam engine to the high-tech tractor

It was only 100 years ago, in 1906, that the German company Hart-Parr coined the word 'tractor'. It was from then on that the mechanisation of agriculture really took off. Only 30 years later, tractors were widely used and when, at the end of World War II, food for the population had to be ensured, a boom in the mechanisation of agriculture took place. Technological development in the field of tractors has not diminished since then and even if the outward design and appearance has stayed basically the same, the inside of the machine is so imbued with new technology and power that an 'average' driver finds it hard to come to terms with it.

Traction engines were basically steam engines on wheels and here we see a model from the engineering factory of R. Wolf in Magdeburg from 1862.

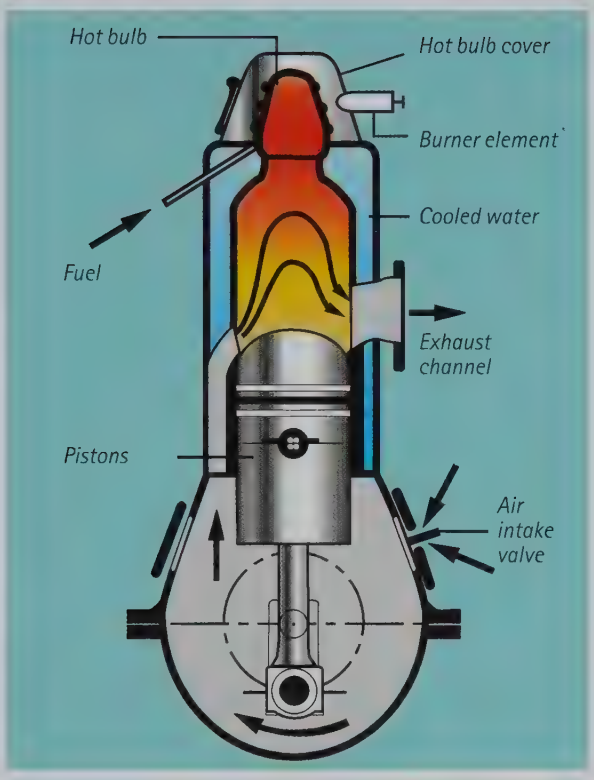
Since the invention of the steam engine at the end of the 18th century, it has been a basic aim to save the amount of work put in by both man and animals in all the various spheres of economic activity, and this has been just as important in agriculture. At first, the steam engine was used as a stationary means of power, for example in threshing, grinding corn and compacting straw, or as water pumps. Naturally, there soon came the more attractive idea of having a machine with its own power that could save the farmer from those most arduous of tasks, like ploughing with a team of animals. The invention of the traction engine in Great Britain was a first step in this direction. However, these steam engines on wheels used so much fuel and were so unreliable that, as before, man and beast were still cheaper and quicker. This situation was viewed differently in the USA because of the enormous size of the plains to be worked on. On great areas like these, one could couple together several ploughs at once. Also, the cost-benefit ratio was different – admittedly still not as good as with man and animal but good enough to raise hopes that further efforts at development would provide much better reward than they did in Europe. Stationary steam-powered ploughs were built: a traction engine was set up on each side of the field and, with the help of a cable pulley, the plough was dragged over the land.

A milestone on the road to mechanisation in agriculture was the steam plough, patented in 1856 by the Englishman John Fowler.

Progress through new engines

The breakthrough in the mechanisation of vehicles with the arrival of the internal-combustion engine was evident not only on the roads but also in the fields; this form of engine is still referred to today as the Otto after its inventor, Nikolaus Otto. The American firm of Rumely installed an internal-combustion engine on a chassis made for steam tractors. In 1890, the Englishmen Akroyd and Hornsby created the so-called 'hot bulb' engine. It worked with reasonably priced heavy oil, which was pressed through the pistons to the hot bulb and so was ignited. The range of engines from the 19th century was completed by Rudolf Diesel with the diesel engine. At first, it was mainly stationary agricultural machines, like threshing machines, that had these engines attached to them, as it was these that were still being used for farm work. In 1907, Deutz introduced a ploughing machine that had an internal-combustion engine. However, all these developments still suffered from the fact that so much fuel was used and the cost was so high that even medium-sized estates and certainly small farms did not think it was worth it to buy one. The breakthrough was made by Henry Ford, who did not simply have the ambition to design a car for the common man, but also to design a tractor for every farmer. He spent 10 years developing the Fordson tractor from the front part of a car and the wheels of a reed cutter. This was where the block design – using the engine block to hold the machine together – came from and it is still in use today. This tractor was not heavy and began to come off the production line in 1917. It came at such a good price that even small businesses could afford to buy one. What also made it such an attractive proposition was its versatility. With the plough, it could be used for all types of work on farmland and it had a cable pulley that could be attached to stationary vehicles. Apart from this, it was also suitable as a towing vehicle for hay carts and all kinds of other equipment.

The Fordson F, the first block design built tractor in the world, which came on to the market for the first time in 1917.



In the so-called hot bulb engine, the fuel is ignited against the white walls of the pre-combustion chamber – the hot bulb. Hot bulb engines are simple in design yet this makes them even more robust and long lasting. Because of their enormous life span, they remained popular for a long time to provide power for agriculture.

World War II puts the brakes on

In Germany, it was the firms of Lanz, Hanomag and Deutz above all others who advanced the process of mechanisation in agriculture. Whereas Lanz used exclusively the hot bulb engine, the other manufacturers soon turned to the diesel engine; not only was it almost indestructible but it was also very economical because of its reasonable fuel price. Lanz finally brought out a suitable tractor for small farms in 1936, but World War II prevented any further development in the mechanisation in agriculture in Germany – as well as in the rest of Europe. Many tractor factories were transformed into armaments works and the lack of liquid fuel took its toll.

From growth market to cut-throat competition

The end of World War II signalled the start of a golden era for small tractors. The population had to be supplied with agricultural produce and small tractors made for much more effective cultivation. Many businesses that had previously made agricultural machines or other types of machines recognised this growing market and turned to the building of small tractors. However, many of them did not realise that what seems, at first, to be an inexhaustible market, will at some time become satiated. This happened at the end of the 1950s. Every farm in Europe, no matter how small, had its own tractor. Since they were very robust vehicles and many of the farmers could repair them themselves, this market, which until then had been booming, collapsed. As well as this, those farmers who were considering buying a new tractor were now demanding better performance and broader possibilities of use for the tractor itself. Only those manufacturers who had their fingers on the pulse at that time and could fulfil these new needs had any chance at all. Even so, the smaller firms could not compete with the more reasonable prices of the bigger firms. This tough rivalry, which is even keener nowadays, led to mergers and takeovers. Only the large businesses could afford the development costs for new tractors and still today, only those businesses with financial might can afford a high-tech tractor with at least 40 gears, an ergonomically designed driver's cabin or even a satellite navigation system.

The greatest tractors from A to Z

Advance-Rumely

The firm of Advance-Rumely achieved success at the beginning of the 20th century with its range of large, oil-cooled tractors, but because its tractors were comparatively expensive, it could not match up in the long term with the more reasonable prices of its competitors on the American market. The firm was taken over in 1931 by Allis-Chalmers and the Rumely symbol faded into history.

Advance-Rumely Oil Pull G 20-40

The first tractor, which Rumely built from 1909 onwards, went by the name of Oil Pull. It produced 14 models of this type until 1931. This was the year in which the firm was sold to Allis-Chalmers and so the brand name Advance-Rumely ceased to be. The 40 hp Oil Pull G 20-40 was available until production ceased.

Model:	*Advance-Rumely Oil Pull G 20-40*
Production period:	*1923–1931*
Hp/kW:	*40/29.3*
Cubic capacity:	*27,837*
No. produced:	*56,500 (all models)*

Advance-Rumely Oil Pull Type H 1918

The company of Rumely, which changed its name in 1915 to the Advance-Rumely Thresher Company Ltd., built not only agricultural machines but also steam engines and one can tell from the way they were built that they were all constructed along similar lines. One of their characteristics was the comparatively large volume of the low rotating Otto engines with water injection and oil cooling. Amongst the rather smaller vehicles was the Model H with its 30 hp two-cylinder engine, which was known either as a 14-28 or a 16-30.

Model:	*Advance-Rumely Oil Pull Type H 1918*
Production period:	*1918–1924*
Hp/kW:	*30/22*
Cubic capacity:	*10 202*
No. produced:	*56,500 (All models)*

Advance-Rumely Oil Pull 12-20

The tractors from Advance-Rumely seemed simply enormous after manufacturers like Fordson had introduced petrol-driven tractors, which were lighter by a long way. Advance-Rumely reacted to this by converting the vehicles that had made their name under the title Oil Pull. The 12/24 model was first built in 1924 but did not have the same powerful effect as its predecessors, but it still weighed in at 4 tonnes and was still quite heavy compared to the new tractors built in the block design style.

Model:	*Advance-Rumely Oil Pull 12-20*
Production period:	*1924*
Hp/kW:	*20/14.6*
Cubic capacity:	*7037*
No. produced:	*56,500 (All models)*

Allgaier

The firm of Allgaier from Uhingen in Württemberg, Germany caused a revolution in agriculture in 1950 with the rather unimposing yet unbeatably priced AP 17, which was built in the block design manner. The construction plans for the AP 17 were based on the designs of the constructor Ferdinand Porsche, who was pursuing his dream of a people's tractor that every farmer could afford. This little tractor was a real all-rounder and was so popular right from the start that it immediately got to second place in the officially accredited statistics for 1950. For the first time, many small farm businesses were able to get a tractor. This people's tractor forced the other manufacturers to take a similar approach and they began to produce more small, reasonably priced tractors.

Allgaier AP 17

The Allgaier AP 17 block construction tractor weighed 950 kg and was not only light but was also on offer at a much more reasonable price than its competitors. However, it was not just the price, which caused a minor sensation. It was the technology that also convinced the buyers. Its standard equipment was far superior to that of many other tractors, and it came with track adjustment, gantry axles, a hydraulic, turbo start-up system, and, last but by no means least, an electric starter motor. Erwin Allgaier's company also used to offer all manner of accessories and fittings. The AP 17 in the picture with its 18 hp engine is a model from 1951.

Model:	*Allgaier AP 17*
Production period:	*1950–1953*
Hp/kW:	*18/13.2*
Cubic capacity:	*1374*
No. produced:	*9000*

Allgaier A 22

The Allgaier company began production of the A 22 in the summer of 1950. It weighed 1525 kg, yet it could still pull loads of 15 tonnes, which was a fine achievement for that time. The designers had developed the technology for the A 22 from the R 22 model. The bonnet was enclosed and it had a top speed of 12.5 mph.

Model:	*Allgaier A 22*
Production period:	*1950–1953*
Hp/kW:	*22/16.1*
Cubic capacity:	*1840*
No. produced:	*5000*

Allgaier R 22

The successor to the R 18, the R 22, which was built from August 1949 (here is a picture of one from 1952), had a 22 hp engine, and so a higher performance than that of its predecessor. Also, the radiator tank was rounded whilst that of the R 18 was square. Its back wheels also had a bigger diameter.

Model:	*Allgaier R 22*
Production period:	*1949–1952*
Hp/kW:	*22/16.1*
Cubic capacity:	*1840*
No. produced:	–

Allis-Chalmers

Allis-Chalmers is one of the oldest tractor producers in the USA. It had begun production of agricultural tractors in 1914 and, during the economic crisis of the 1930s, managed to fare so well that it could to buy up other companies, like Advance-Rumely. Due to the development of reasonably priced light tractors, it was able to build even further upon its excellent position in the tractor market. During World War II, this model was shipped over to England to support the population and to ensure more effective cultivation of the land. From 1948, this tractor was actually built in Great Britain itself.

Allis-Chalmers WC

The Allis-Chalmers WC, which was built for 14 years from 1934, was immensely successful and 178,000 were built. The WC had pneumatic tyres and was available with a wide track design as well as the standard track. It had a four-cylinder 25 hp Otto engine and four-speed gearbox, which enabled it to reach a top speed of 9 mph. The wide-track, row-crop tractor in the picture dates from 1935.

Model:	*Allis-Chalmers WC*
Production period:	*1934–1948*
Hp/kW:	*25/18.3*
Cubic capacity:	*3294*
No. produced:	*178,000*

Allis-Chalmers B

Even though $495 was a great deal of money in 1938, the price of the Allis-Chalmers Type B light tractor was still amazingly reasonable when it was first introduced. It was used in England in World War II and this led to the Allis-Chalmers Type B being produced there from 1948. The vehicle in the picture with the standard size back wheels is actually a model from this year. Characteristic of small tractors is the comparatively light weight of 1027 kg and four-speed gearbox, which gave speeds from 2 to 11.5 mph. Its four-cylinder Otto engine could be driven by petrol or paraffin.

Model:	*Allis-Chalmers B*
Production period:	*1938–1957*
Hp/kW:	*20/14.6*
Cubic capacity:	*2045*
No. produced:	*127,000*

Allis-Chalmers WD

The four-cylinder Otto engine of the Allis-Chalmers WD could be powered either by petrol or by paraffin; both performed equally well. Used for root crops and row crops, it had a four-speed gearbox and weighed 1,800 kg and so was clearly heavier that the Allis-Chalmers Type B light tractor.

Model:	*Allis-Chalmers WD*
Production period:	*1948–1953*
Hp/kW:	*34/24.9*
Cubic capacity:	*3294*
No. produced:	*131,273*

Allis-Chalmers WF

The Allis-Chalmers WF – here is one from 1947 – was produced for 11 years, although its production had to be interrupted from 1943 to 1944 because of World War II. The water-cooled, four-cylinder Otto engine operated at 25 hp. It weighed 1724 kg and had four-speed gearbox.

Model:	*Allis-Chalmers WF*
Production period:	*1940–1951*
Hp/kW:	*25/18.3*
Cubic capacity:	*3151*
No. produced:	–

Bautz

The Bautz Company from Saulgau in Germany produced tractors purely as a kind of sideline. They had taken over the rights to the Zanker M 1 and used them to construct the Bautz AW/AS 120 with a modern, direct injection Bautz diesel engine. Bautz produced tractors in the small and medium range, both in build and performance. At the start of the 1960s, when the market was saturated, Bautz ceased producing tractors.

Bautz AS 120

The Bautz As 120 was the only small tractor in Germany to have a two-cylinder engine. In fact, it had a 12 hp, two-cylinder, four-stroke diesel engine with the brand name MWM (Motor Works Mannheim) and was essentially based on the Zanker tractor. It came onto the market at the beginning of 1951.

Model:	*Bautz AS 120*
Production period:	*1951–1953*
Hp/kW:	*12/8.8*
Cubic capacity:	*1248*
No. produced:	–

Bautz AS 122 B

The Bautz AS 122 B could be described, quite justifiably, as a lightweight amongst tractors, weighing in at only 950 kg. It had an air-cooled, MWM one-cylinder diesel engine and a four-speed gearbox. Power take-off, power lift, a belt pulley and a lighting system all came as standard equipment.

Model:	*Bautz AS 122 B*
Production period:	*1952–1954*
Hp/kW:	*12/8.8*
Cubic capacity:	*905*
No. produced:	–

Bautz AL 240

When Bautz brought the AL 240 onto the market in 1954, no one imagined that the firm would soon stop building tractors. However, the end of the 1950s saw a dramatic slump in sales because the market, especially for small tractors, was to a great extent saturated, which meant that production was no longer profitable. The AL 240, which weighed 1325 kg, had a two-cylinder diesel engine, which gave it 24 hp, and was only built until 1960.

Model:	*Bautz AL 240*
Production period:	*1954–1960*
Hp/kW:	*24/17.6*
Cubic capacity:	*1810*
No. produced:	–

Belarus

The Belarus plant in Minsk in the former Soviet Union began production in 1946. Belarus exported its machines chiefly to those countries of the former socialist economic community known as COMECON, but also developing countries and some Western industrial nations even placed orders with them. Their vehicles were designed in a simple fashion but still were very economical and robust and, above all, they were good value for money – an advantage not to be underestimated with regards to their competitors. In those countries where there is a lack of virtually everything, the Belarus tractors are liked not least because they can basically cope with anything. They are also excellent off-road and very powerful, and are thus a great success as exports to the developing countries. Until today, 2.5 million vehicles have been sold worldwide – a significant success for the firm from Minsk.

Belarus DT 20

This model had a water-cooled, one-cylinder diesel engine with 20 hp, a five-speed gearbox and weighed 1650 kg. These are the technical data of the small, economical and robust DT 20, produced from 1957 onwards by the Belarus plant, whose name derives its location – in Minsk, the capital of Belarus or White Russia.

Model:	*Belarus DT 20*
Production period:	*1957–1965*
Hp/kW:	*20/14.6*
Cubic capacity:	*1720*
No. produced:	–

Belarus T 40

The Belarus T 40 was produced from 1959 and differed from most of Belarus's other tractors since it was not driven by a water-cooled, centrifugal chamber diesel engine but by an air-cooled, four-cylinder MTZ diesel unit. Its 12-38 back wheels along with its large ground clearance ensured that it was suited to maintenance work. The eight-speed gearbox of the T 40 allowed it to reach speeds of up to 17.2 mph.

Model:	*Belarus T 40*
Production period:	*1959–1970*
Hp/kW:	*40/29.3*
Cubic capacity:	*4150*
No. produced:	–

Belarus MTZ 5 MS

Its large tyres and its great ground clearance made the MTZ 5 an ideal vehicle even on rough terrain. A simple design coupled with great ruggedness made it a very popular piece of equipment in the Soviet Union and Eastern Bloc. Due to its ten-speed gearbox, it had no problem in reaching speeds of up to 14 mph. Just like the other models in this series, this tractor from 1958 had a water-cooled, four-cylinder diesel engine.

Model:	*Belarus MTZ 5 MS*
Production period:	*1958–1966*
Hp/kW:	*60/43.9*
Cubic capacity:	*4180*
No. produced:	–

Belarus MTS 5 MC

A driver's cab, like the one on this MTS 5, was not always present on tractors of the Belarus brand. Many of these types of vehicle were and are deliberately fitted in a basic manner, since buyers keep a close eye on price. This MTS 5 had a gear system with ten forward and also two reverse gears and a water-cooled, four-cylinder, diesel engine with a maximum engine speed of 1500 rpm.

Model:	*Belarus MTS 5 MC*
Production period:	*1958–1966*
Hp/kW:	*45/32.9*
Cubic capacity:	*4750*
No. produced:	–

Bolinder-Munktell/Volvo

Although the firms of Volvo and Bolinder-Munktell had amalgamated in 1950, and even though the BM Viktor 230, which was built from 1956, and the Volvo T 230 were identical, they were actually marketed by two separate sales organisations. The public were thus given the idea that the two brands were, to some extent, independent and this was underlined by the difference in colour of their paintwork. Bolinder-Munktell vehicles were dark green, whilst the Volvo models were red. Quite a major factor in the success of the business was the Volvo's powerful, direct injection diesel engine, which had up to six cylinders. One of the most popular series of models of the Swedish company Bolinder-Munktell/Volvo was the Volvo T 350 Boxer.

Bolinder-Munktell-Volvo T 21

It was with the help of a slow-burning wick that the petrol- or paraffin-driven T 21 tractor with its two-cylinder, two-stroke diesel engine and hot bulb, was started up. This whole process took around ten minutes. This model from 1950 is one of the first to be brought out by Bolinder-Munktell after it had been amalgamated in that same year with another Swedish company, Volvo. This tractor weighed 2600 kg and had a five-speed gearbox, giving it a possible top speed of 12.7 mph.

Model:	*Bolinder-Munktell-Volvo T 21*
Production period:	*1950–1952*
Hp/kW:	*45/32.9*
Cubic capacity:	*4500*
No. produced:	–

BM 350/Volvo T 350

Almost 30,000 of the BM 350/Volvo T 350 were produced, showing how successful sales were for this vehicle. This was helped to a considerable degree by the Volvo gearbox, which had ten forward and two reverse gears, along with the water-cooled, two-cylinder, four-stroke, direct injection diesel engine. This BM model from 1958 weighed 2370 kg and was one of the first in this series. It was only later that the BM 350/Volvo T 350 was manufactured with a three-point hydraulic system and power take-off.

Model:	*BM 350/Volvo T 350*
Production period:	*1958–1967*
Hp/kW:	*56/41*
Cubic capacity:	*3780*
No. produced:	*28,400*

BM Viktor/Volvo T 230

The Viktor/Volvo T 230 was first produced in 1956 and came in the form of two similarly built models but with different paintwork, and had a water-cooled, two-cylinder, BM four-stroke diesel engine with a capacity of 29 to 33 hp, depending on the engine speed. It weighed 1710 kg and, with its five-speed gearbox, could reach speeds of 2.7 to 16.7 mph. This Volvo tractor comes from the year 1958.

Model:	*BM Viktor/Volvo T 230*
Production period:	*1956–1961*
Hp/kW:	*33/24.2*
Cubic capacity:	*2244*
No. produced:	*16,000*

BM/Volvo T 350

A driver's cab was essential for the BM/Volvo T 350 – here is a model from 1956 – if the vehicle was going to be used on the road. In production until 1961, it was often used on the roads or to pull trailers and managed to produce a top speed of 17.4 mph. An air-brake system was recommended as an extra accessory.

Model:	*BM/Volvo T 350*
Production period:	*1956–1961*
Hp/kW:	*56/41*
Cubic capacity:	*3780*
No. produced:	*28,400*

Volvo T 350 Boxer

Because of its immense pulling power, the Swedish armed forces used the Volvo T 350 Boxer as a machine for towing and it also became one of the most popular pieces of equipment in Sweden's forestry industry. The Volvo T 350 Boxer was designed in the same way as the BM 350. It had a three-cylinder, direct injection diesel engine and similar performance of 56 hp. It also had a very practical, two-stage, power shift transmission.

Model:	*Volvo T 350 Boxer*
Production period:	*1958–1967*
Hp/kW:	*56/41*
Cubic capacity:	*3780*
No. produced:	*28,400*

BM 350/Volvo T 350 Boxer

Here is a superbly restored Volvo T 350 Boxer, built in 1963. It had a three-cylinder, four-stroke, water-cooled Type 1113 TR diesel engine. This powerful machine also possessed power shift transmission, which had ten gears, including two reverse gears. With speeds of between 1.6 to 17.3 mph, it was excellent for use on the roads and was also suited to forestry and agricultural work. From 1964 onwards, this model also had power take-off and a hydraulic power lift as standard.

Model:	*BM 350/Volvo T 350 Boxer*
Production period:	*1958–1967*
Hp/kW:	*56/41*
Cubic capacity:	*3780*
No. produced:	*28,400*

Volvo 470 Bison

With its ability to manage 75 hp, which at that time was tremendous performance, the 470 Bison was similar in design to the Bolinder-Munktell, except that BM 470 was on offer with dark green paintwork. It weighed 3560 kg and first came onto the market in 1959 (here is one with a driver's cab and all-round vision from 1961) and it was considered to be one of the most powerful tractors produced anywhere in Europe. For this tractor, Volvo had developed a four-cylinder, water-cooled diesel engineand a six-speed gearbox with five forward gears and one reverse.

Model:	*Volvo 470 Bison*
Production period:	*1959–1966*
Hp/kW:	*75/54.9*
Cubic capacity:	*5040*
No. produced:	–

Volvo T 814

Enormous front and back tyres in sizes 14.9-24 and 18.4-38 were what made the Volvo T 814 different. The water-cooled, direct injection, six-cylinder, diesel engine of this powerhouse gave it a performance of 136 hp. It was also supremely well equipped for one of its main tasks, which was the clearing of trees in the forests of Scandinavia for the manufacture of paper. It weighed 6940 kg, had a smooth undercarriage and a low centre of gravity and thus could cope with any kind of terrain. It had a gearbox with eight forward and two reverse gears, which enabled speeds of up to 17.6 mph and this ensured that the vehicle could perform to its optimum level in all its areas of work – here is a vehicle from 1975 with ballast weights.

Model:	*Volvo T 814*
Production period:	*1969–1979*
Hp/kW:	*136/99.6*
Cubic capacity:	*5480*
No. produced:	*1650*

Bührer

The large Swiss tractor manufacturing firm of Bührer had already been building tractors since 1928 from car parts, but tractors that were really worthy of the name only came into being in 1930. Bührer started off with small models, which had 25 and 40 hp, later going up to 35 and 50 hp. At the beginning of the 1950s, the company put its tractors into three classes, which were scaled according to performance. The smallest ones were the Bührer Spezial, like the TO 4, then came the medium or standard models, like the MFD 4, and the heaviest class had models like the BD 4. The company struggled following the loosening of import restrictions on foreign tractors and, despite their commitment to industrial tractors, the company could not produce their goods economically in the long term. No Bührer tractors have been produced since 1978.

Bührer Typ C

The twin pneumatic back tyres of the 1930s, like these on a Type C, were given the name 'All-terrain' . This Type C small tractor weighed 1450 kg and was produced from 1930. It had the Otto engine of a Ford car, 40 hp and a four-speed gearbox. Its top speed was 12.4 mph.

Model:	*Bührer Typ C*
Production period:	*1930–1936*
Hp/kW:	*40/29.3*
Cubic capacity:	*3285*
No. produced:	–

Bührer BG 4

The BG 4 was introduced in 1937 and its front axle caused quite a stir because it allowed a wheel lock of around 80 degrees. For the engine, however, Bührer went back to the tried-and-trusted four-cylinder water-cooled Ford engine of the Type B. With its four-speed gearbox, the BG 4 had a maximum speed of 12.4 mph. When the BG 4 went into series production, Bührer set new standards with an electric lights system as well as a starter motor.

Model:	*Bührer BG 4*
Production period:	*1937–1942*
Hp/kW:	*50/36.6*
Cubic capacity:	*3280*
No. produced:	–

Bührer Spezial TO 4

Weighing only 1100 kg, the Spezial was amongst one of the comparatively small and light models in the Bührer range, which were aimed at smaller agricultural concerns. It was suitable for all types of work and that is why even larger farms sometimes used them as a second tractor. The Bührer TO 4 had a car engine – in fact it was the four-cylinder Otto engine of the Opel Olympia, but naturally with a reduced engine speed. The Bührer company itself actually designed the five-speed gearbox, which provided speeds between 1.9 and 12.4 mph. Bü also did produce of course more powerful models, like the TO 4 with a double-sprung front axle, which was one of the vehicles in the smallest class. This tractor dates from 1954.

Model:	*Bührer Spezial TO 4*
Production period:	*1952–1954*
Hp/kW:	*25/18.3*
Cubic capacity:	*1490*
No. produced:	*610*

Bührer BD 4

The BD 4 first came into use in 1946 and was one of the best-performing tractors of that time. This compact tractor had a four-cylinder, swirl chamber, diesel engine, which the Bührer company had designed itself. During World War II, the import into Switzerland of American engines used in tractors, like Buick, Ford and Chevrolet, had become more difficult, so Bührer himself decided to develop his own engines. The BD 4 powerhouse, with its 55 hp, managed to fulfil all the demands put on it in the fields of agriculture and forestry.

Model:	*Bührer BD 4*
Production period:	*1946–1950*
Hp/kW:	*55/40.3*
Cubic capacity:	*3920*
No. produced:	–

Bührer UM 4

This UM 4 from 1957 was almost unique. Only four of the 1550 vehicles built in this series came with front power take-off and a ten-speed gearbox. This "Spezial" tractor from the smallest performance category of the Swiss company was meant to catch the eye of smaller business concerns. From 1950, Bührer had divided his tractors into three performance categories. He had not personally constructed the engine of the UM 4; it was, in fact, a water-cooled, four-cylinder, OM 636 diesel engine, which had originally been developed for the Mercedes Unimog. However, with a reduced engine speed, it was suited to medium weight tractors. The UM 4 series originally had a five-speed gearbox – although this one with a ten-speed gearbox was available at a higher price.

Model:	*Bührer UM 4*
Production period:	*1954–1962*
Hp/kW:	*30/22*
Cubic capacity:	*1770*
No. produced:	*1550*

Bührer Standard MS 12

The MS 12, which was produced from 1960, belonged to the medium-size"Standard" category of Bührer tractors. Although the water-cooled, four-cylinder, four-stroke, diesel engine actually came from Leyland in England, the Swiss firm itself had developed the Triplex gearbox with its ten forward and two reverse gears. If it was needed for use at low speeds, as low as 0.125 mph, a crawling speed gear could be ordered in addition. At extra cost there also came a sprung, front axle, a canopy, three-point hydraulics, a half-power take-off shaft for driving axle trailers and a belt pulley.

Model:	*Bührer Standard MS 12*
Production period:	*1960–1963*
Hp/kW:	*38/27.8*
Cubic capacity:	*2260*
No. produced:	*1480*

Bührer GM 29 Super Six

Whether with four-wheel drive or not, the Super Six was one of Bührer's best performance models of all. It was used in agriculture, forestry and in industry for a multitude of purposes. Its six-cylinder, direct injection, OM 352 diesel engine had been developed by Daimler-Benz in Germany and had 100 hp. Its fifteen-gear Tractospeed light change gear system, with three switching groups, was one of the most modern of its era. The Super Six had no problem at all with speeds of between 0.55 and 12.4 mph. Also, the planetary drive system of the back axle, from ZF, was one of the finest that vehicle manufacturers of that era could offer. At extra cost, the Super Six could also come with fluid turbo coupling and free wheel lock. Thé tractors of the G series were amongst the last models that Bührer developed. In 1978, the competition became so fierce that the Swiss company gave up building tractors.

Model:	*Bührer GM 29 Super Six*
Production period:	*1968–1975*
Hp/kW:	*100/73.2*
Cubic capacity:	*5670*
No. produced:	*51*

Case

Before the Case company began to build tractors in 1911, it had made steam traction engines. At first, Case tractors were fitted with engines placed across the body of the machine, so-called 'crossmotors', and could be powered using petrol or paraffin. From the model C onwards, the engines were laid lengthwise but still retained their enclosed chain drive, which was a speciality of the Case tractor. After World War II, like many other manufacturers, Case concentrated on the tried and trusted models like the DC model that was produced from 1940 to 1952. Since they could not have a range without a light tractor, Case brought the VA model onto the market; it was very successful, with 60,000 sales. Case continued to have success in the following years, so much so that in 1984, it was able take over the agricultural machines and tractors concerns of the International Harvester Company. On the tractors themselves, the word 'International' was replaced by Case IH.

Case 10-18 Crossmotor

By modern-day standards, a top speed of 3.5 mph is very low, but in 1919, the Case 10-18 Crossmotor was amongst the most modern on the market in its particular class of relatively light tractors, the Case weighed 1692 kg and its characteristics included the 'crossmotor', four-cylinder engine providing 18 hp inside a casting frame. It could be powered with petrol as well as paraffin.

Model:	*Case 10-18 Crossmotor*
Production period:	*1919–1921*
Hp/kW:	*18/13.2*
Cubic capacity:	*3682*
No. produced:	*9000*

Case 15-27 Crossmotor

The Case 15-27, which followed the 10-18, also had a transverse engine, characteristic of Case tractors at that time. It was a better performer than its predecessor, with 27 hp, and the weight of the tractor was greater, at 2935 kg – around 1250 kg heavier. The Model L came onto the market in 1929, four years after Case had ceased to make the 15-27, which had been a great success with 17,500 sales, and was the last Case tractor with the 'crossmotor'.

Model:	*Case 15-27 Crossmotor*
Production period:	*1919–1924*
Hp/kW:	*27/19.8*
Cubic capacity:	*6257*
No. produced:	*17,500*

Case C 28

The Model C range, which Case developed in the 1930s, comprised some of the most successful tractors of that particular era. The basic model was the C tractor, followed in 1932 by the Type CC, which was a broad gauge tractor used for row cropping. The following model was the C 28, which followed the design of its predecessor and, similarly, had an Otto engine. It had 35 hp just like the Case C, which was built until 1939.

Model:	*Case C 28*
Production period:	*1936–1946*
Hp/kW:	*35/25.6*
Cubic capacity:	*4225*
No. produced:	–

Case Model DC

The Case DC was first produced in 1940, had a water-cooled, 36 hp four-cylinder Otto engine and could be powered by petrol as well as paraffin. It was available as a standard model as well as a row-crop model. Although the DC had been introduced in the first years of the war, the tried-and-tested design continued to be built until 1952. This row-crop DC tractor dates from 1947.

Model:	*Case Model DC*
Production period:	*1940–1952*
Hp/kW:	*36/26.3*
Cubic capacity:	*4040*
No. produced:	–

Case Model VA

The Case VA was a light, small tractor with relatively low performance. By introducing this tractor, the American company had responded to the production of light models by its rivals John Deere and Allis-Chalmers, having noticed that these were selling very well. The Model VA itself became a great success and 60,000 of them were built by Case between 1940 and 1953, each weighing 1165 kg. The model with the back tyres with the standard size 9-24 – here is one with a rotary mower fixed to the side – had a four-cylinder paraffin engine and a four-speed gearbox, which enabled a top speed of 8.3 mph.

Model:	*Case Model VA*
Production period:	*1940–1953*
Hp/kW:	*18/13.2*
Cubic capacity:	*1940*
No. produced:	*60,000*

International Hydro 100

The International Harvester Company was a very successful firm and, in the 1970s began cooperation with the Case company in its agricultural machines section. In 1972, the Hydro 100 came onto the market, weighing 5200 kg and with a six-cylinder diesel engine. This tractor dates from the year 1975. The new, built-in, hydrostatic gearbox, fitted as standard, caused something of a sensation as it enabled the driver to select speeds between 0.3 and 18 mph.

Model:	*International Hydro 100*
Production period:	*1972–1978*
Hp/kW:	*135/98.8*
Cubic capacity:	*7145*
No. produced:	–

IH 644

An aluminium grille was one of the characteristics introduced on the IH 644 the year before the release of higher-performance IH models. The water-cooled, four-cylinder, diesel engine with direct injection could produce 60 hp and this put this tractor in the medium performance range. Its eight-speed, torque converter gearbox gave it speeds in the range of 0.4 to 15 mph.

Model:	*IH 644*
Production period:	*1972–1976*
Hp/kW:	*60/43.9*
Cubic capacity:	*3382*
No. produced:	*4270*

IH 433

The IH 433 is a real rarity, since only 22 were produced, starting in 1974. It was used in a comparatively unusual way, on plantations like vineyards, and where fruit and hops were grown. It had a three-cylinder, direct injection diesel engine with water-cooling and a light switch transmission, which, depending on the design, had eight or fourteen forward gears and two or four reverse gears. The bonnet was made of plastic, reinforced with glass fibre. It was by no means as clumsy in appearance as the other models, since it had a more rounded design.

Model:	*IH 433*
Production period:	*1974*
Hp/kW:	*40/29.3*
Cubic capacity:	*2536*
No. produced:	*22*

Case IH 533

If required, the Case IH 533 could be supplied with the Silent 85 cabin, which not only gave a marvellous range of vision, but also was designed to be sound-insulated, thus catering for all the needs of the owner. The 533 A design, like the one in the picture, had four-wheel drive. It had a water-cooled, three-cylinder, direct injection diesel engine, which produced a maximum of 2200 rpm. A super, crawling gearbox could also be provided and, according to choice, it had a top speed of 15.5 or 18.6 mph.

Model:	*Case IH 533*
Production period:	*1984–1986*
Hp/kW:	*45/32.9*
Cubic capacity:	*2536*
No. produced:	–

Case IH 840

Four-wheel drive was one of the extras that the customer could choose when purchasing the IH 840. The vehicle pictured is one of those and has a standard driver's cab. The synchronised gearbox was available with eight or sixteen gears, one of which could be a fast gear, giving a maximum speed of 25 mph. With its 67 hp, the IH 840 was the smallest of the medium-range tractors produced from 1986 and it had a performance of up to 105 hp. It had a four-cylinder, direct injection Type D 239 diesel engine, as well as water-cooling and a top engine speed of 2300 rpm.

Model:	*Case IH 840*
Production period:	*1986–1990*
Hp/kW:	*67/49*
Cubic capacity:	*3911*
No. produced:	–

Case IH 1455 XL

The IH 1455 XL attracted a great deal of interest, especially from the great agricultural concerns like those in the USA. It was a heavyweight of 6420 kg and had a performance of 145 hp as well. It had 20 forward and 10 reverse gears, could reach up to 25 mph and was fitted with a planetary drive axle with an automatic self-locking differential, regulated hydraulics and power take-off shaft, all as standard equipment. Its engine was a water-cooled, six-cylinder, direct injection diesel and was turbocharged. However, the wide tyres, which can be seen here in the picture, did not come as standard.

Model:	*Case IH 1455 XL*
Production period:	*1986–1991*
Hp/kW:	*145/106.1*
Cubic capacity:	*6586*
No. produced:	–

Case IH 5140 Maxxum

The 5140 first came onto the market in 1990 and comfort was its main feature. It had a driver's cabin, which was not only sound-insulated but also had an excellent heating and ventilation system. The field of vision of the driver was scarcely hindered by the cabin and the controls were set out in a particularly user-friendly way. There were 16 forward and 12 reverse gears and the driver was able, by means of a power shift reverse gear unit, to switch from forward to reverse gears without using the clutch, thus completing the user-friendly nature of the vehicle. In addition, there was a choice between a 90 hp, four-cylinder, diesel engine with exhaust gas turbo charger and intercooling system, or either a 100 hp or 110 hp with turbocharging, six-cylinder, naturally aspirated diesel engine.

Model:	*Case IH 5140 Maxxum*
Production period:	*1990–1997*
Hp/kW:	*90–110/65.9–80.5*
Cubic capacity:	*3900–5900*
No. produced:	–

Case IH 7120 Magnum

The large Magnum tractors showed themselves to be real powerhouses when they came onto the European market in 1991. The main features of the four models in this series were the high-performance six-cylinder, turbo diesel engines with direct injection and water-cooling and a range between 155 and 246 hp. Included as standard, amongst other things, were a four-wheel drive front axle, which could be employed whilst the vehicle was already in motion, a switchable Powershift gearbox, which could be used when carrying a full load, and 23 forward and 6 reverse gears, along with a self-locking differential; this meant that even if the vehicle sank deep into very wet ground it could still move on without any great difficulty. Naturally, the driver's cabin was wonderfully sound-insulated and the electronic control system of the hydraulic three-point linkage meant that the driver could immediately recognise any faults in the system.

Model:	*Case IH 7120 Magnum*
Production period:	*1991–1997*
Hp/kW:	*182/133.2*
Cubic capacity:	*8300*
No. produced:	–

Case IH JX 1070 C

The three models belonging to the JXC Maxxima series were seen as relatively small tractors because they were quite light in weight. They could manage between 59 and 76 hp – a good deal less than that of the considerably more powerful large tractors. However, the models in this range did have their virtues. They were exceptionally versatile, not least because of their four-wheel drive, and they had high-tech controls inside, which simplified using the vehicle. In addition, they could be used for a great variety of purposes. The JX 1070 C's standard equipment included a three-cylinder, turbo diesel engine and a 16/16 reverse gear system, and there were other options available.

Model:	*Case IH JX 1070 C*
Hp/kW:	*72/53*
Cubic capacity:	*2930*

Case IH MXU 135

The MXU 135 had, as standard, a PowerBoost performance enhancer, which could be used for a short time if necessary to increase the drive of the six-cylinder, turbo diesel engine with its electronic injection and intercooler. There were four more of these models in the MXU-Maxxum series. They could be used for a variety of types of work, capable of carrying great loads and high performance. The MXU 135 had the most powerful engine in the series, with 136 hp.

Model:	*Case IH MXU 135*
Hp/kW:	*136/106*
Cubic capacity:	*6728*

Case IH JX 85

The very flexible JX 85 can be fitted with a transmission capable of increasing its speed to 25 mph. It is a four-wheel drive vehicle, whose high-performance hydraulic system allows it to be used with heavy pieces of equipment. Its water-cooled, four-cylinder, naturally aspirated diesel engine provides 86 hp. It also comes with modern power take-off shafts and several different engine speeds so that the driver can choose between the power or the economy programme.

Model:	*Case IH JX 85*
Hp/kW:	*86/63*
Cubic capacity:	*3900*

Case IH CVX 1170

Case-International were obviously thinking of the environment when designing the CVX 1170, since the engine uses comparatively little fuel, being a 192 hp, six-cylinder, turbocharged diesel engine. It also has technology to reduce the level of pollutants emitted. In spite of all this, it is a real powerhouse and like all five of the four-wheel drive CVX models, can travel at speeds up to 31 mph. The CVX 1170 is best suited to work on the roads. This tractor belongs to the higher end of the medium-size models range and has an infinitely variable gearbox system.

Model:	*Case IH CVX 1170*
Hp/kW:	*192/141*
Cubic capacity:	*6600*

Case IH STX 375 Quadtrac

This caterpillar tractor with centre-pivot steering is one of the more specialised Case tractors. It has four, independently arranged, oscillating, traction drives, by which means it applies comparatively little pressure onto the ground, yet does not lose any of its pulling power. Another of its good qualities is that it only uses a small amount of fuel for its 375 hp. Under the bonnet of this powerful machine lies a specially developed Cummins, six-cylinder, turbo engine with four-valve technology and 16 forward and 2 reverse gears. With regards to comfort, nothing has been forgotten and the driver's cab is actually fitted with air-conditioning.

Model:	*Case IH STX 375 Quadtrac*
Hp/kW:	*375/280*
Cubic capacity:	*15,000*

Challenger

So that heavy tractors do not compress the ground too much, rubber tracks are fitted instead of wheels. The Challenger tractors are real high-tech machines, which do not have a lot in common at all with the tractors from 50 years ago. The Agco-Concern from Duluth in Texas offers two ranges: the MT 700 and the MT 800; there are four models in the latter range, producing up to 482 hp.

Challenger MT 745

The MT 745, with rubber tracks, is one of the four models in the MT 700 series and has a six-cylinder, Caterpillar C9 turbo engine with 24 valves and 255 hp. The other three models range between 235 and 306 hp. It has the Caterpillar-16/4, electronic, hydraulic, fully manual transmission and can reach speeds of up to 25 mph.

Model:	*Challenger MT 745*
Hp/kW:	*255/190*
Cubic capacity:	*8800*

Challenger MT 755

The Agco company's Mobil-Trac technology ensures that the Challenger tractor with its rubber tracks only exerts minimal pressure onto the ground, despite its size and weight, so avoiding compressing the ground too much. However, this tractor with its massive horsepower still retails its immense pulling capacity. In addition, the most modern computer technology ensures that all the components in this mighty machine are functioning perfectly and at the same time it steers and coordinates them all. The so-called Power Management system ensures that the driver always has the vehicle under control by showing him, for example, at what rpm or speed he needs to change into which gear. It can, however, be adjusted so that the gear switching process takes place automatically.

Model:	*Challenger MT 755*
Hp/kW:	*294/216*
Cubic capacity:	*8800*

Challenger MT 865

This Challenger caterpillar tractor with its rubber tracks and its six-cylinder turbo engine has world record maximum performance. It is designated as having 482 hp but can reach 552. The MT 865 is one of four models in the MT 800 series and their engines are all fitted out with electronically guided injection systems as well as an air-to-air, aftercooling, intercooling, ventilation system. In spite of its massive weight of 18,144 kg, the MT 865 only compresses the ground to be cultivated by a minimal amount. The model also offers everything one could desire from the point of view of comfort, in both driving it and controlling it.

Model:	*Challenger MT 865*
Hp/kW:	*482/355*
Cubic capacity:	*15,800*

David Brown

The English tractor manufacturer David Brown made its name during World War II. Many of the aircraft tractors used by the RAF came from the firm's production plant at Meltham. Originally, the company made gearboxes, but in 1935 it joined forces with the Irishman Harry Ferguson and went into the building of agricultural machines. By 1939, David Brown was actually leading in the production of tractors on its own because Ferguson was now cooperating with the American Henry Ford. In 1972, which was the last year in which David Brown produced the 996 model, the American tractor manufacturers Case took over this traditional English firm.

David Brown Cropmaster 25 C

The Cropmaster went into series production in 1946/47 after World War II and its victory march was not to be stopped. This light tractor weighed 1550 kg (here is a model from 1947), had an electronic starter motor and a four-cylinder engine with water-cooling that could be powered by petrol as well as paraffin. The six-speed gearbox incorporated two reverse gears and was designed to reach speeds between 1.8 and 16.5 mph.

Model:	*David Brown Cropmaster 25 C*
Production period:	*1946–1953*
Hp/kW:	*32/23.4*
Cubic capacity:	*2523*
No. produced:	–

David Brown 50 D

In the 1950s there was a demand for tractors with greater performance levels. So David Brown began production of the 50 D, which had 50 hp, a water-cooled, six-cylinder engine and a six-speed gearbox, including two reverse gears. It was a more powerful vehicle compared to the Cropmaster 25 and its successors the 30 C and D, could reach speeds of between 1.3 to 13.5 mph and weighed in at 2535 kg. A modern hydraulics system was offered as an extra accessory. The 50 D was fitted with size 11-38 back wheels and an adjustable track as standard. The tractor in the picture dates from 1954.

Model:	*David Brown 50 D*
Production period:	*1953–1959*
Hp/kW:	*50/36.6*
Cubic capacity:	*4059*
No. produced:	–

David Brown Cropmaster 25 D

David Brown brought the Cropmaster 25 D onto the market in 1949. It had a six-speed gearbox and a maximum speed of 14.9 mph. Its drive unit consisted of a four-cylinder, four-stroke, diesel engine with water-cooling and direct injection and its maximum engine speed was 1800 rpm. The 25 D had size 11-28 back wheels as well as adjustable track widths and was more popular with the customers than its predecessor the 25 C.

Model:	*David Brown Cropmaster 25 D*
Production period:	*1949–1953*
Hp/kW:	*34/24.9*
Cubic capacity:	*2402*
No. produced:	–

David Brown Typ 750

A three-point hydraulic system, as well as a relatively low weight of 1700 kg, were amongst the hallmarks of the Type 750, which was produced for seven years from 1958. The tractor shown comes from the year 1962. Belonging to the lower to medium capacity range of tractors, the Type 750 naturally attracted buyers in the lower and medium size range of agricultural businesses. In spite of its comparatively small engine performance of 28 hp, it was exceptionally powerful for its size. It had a water-cooled, four-cylinder, direct injection diesel engine, developed and produced by the firm itself, just like the gearbox with six forward and two reverse gears as well as intermediate gear stages.

Model:	*David Brown Typ 750*
Production period:	*1958–1965*
Hp/kW:	*28/20.5*
Cubic capacity:	*2210*
No. produced:	–

David Brown 996

Like most of the previous models, the 996 was fitted with a drive unit produced by the manufacturers themselves. This was a four-cylinder, diesel engine with water-cooling, direct injection and 65 hp. Belonging to the 'white' series, this vehicle also had a gearbox with 12 forward gears and its bonnet shape had been changed from those of its predecessors, making it more streamlined. The 996 achieved speeds of between 1.1 and 16.5 mph. It was the last model to be produced by David Brown before they were taken over by their American rivals, Case, in 1972.

Model:	*David Brown 996*
Production period:	*1965–1972*
Hp/kW:	*65/47.6*
Cubic capacity:	*3600*
No. produced:	–

Deutz

Deutz moved from originally being an engine manufacturer to producing tractors. It was in 1927 that Deutz's engine factory in Cologne began building agricultural machines, starting with light tractors. But the company had already caught the eye through the production of heavy tractors and steam ploughs. Its first big success was with a tractor that people referred to as the 'steel tractor'. It was built in the block design style and got its nickname from the fact that its oil tank was made from welded steel and, together with the housing of the gearbox, had a supporting function. So these tractors' block design meant that they needed no frame. The steel tractor sold so well that more models came onto the market. At the beginning of the 1950s, Deutz developed air-cooled engines. Air-cooling saved space and was lighter and there was no need to fill up with water, which could freeze up in the winter. The thermal coefficient of an air-cooled engine was higher and so the drive unit used less fuel. As well as this, it did not need a water circulation system and so one possible source of engine problems disappeared. Also, an engine with air-cooling was ready to use without any problem in the hardest winter or in the hottest summer. The Deutz company realised the advantages of all this and was convinced to concentrate on air-cooled engines alone rather than to offer both water-cooled and air-cooled engines, which other manufacturers were doing.

Deutz F 2 M 417

In 1941 Deutz brought out the F 2 M 417, weighing 2550 kg and having a 35 hp two-cylinder engine. This model had a five-speed gearbox, giving it speeds between 2.3 and 12.4 mph and 'only' 3371 of these were built, production ceasing in 1953.

Model:	*Deutz F 2 M 417*
Production period:	*1941–1953*
Hp/kW:	*35/25.6*
Cubic capacity:	*3845*
No. produced:	*3371*

Deutz F 1 M 414

Smaller farm businesses were the successful target group for the F 1 M 414, which was a strong, smaller tractor with 11 hp, giving it the nickname of the Deutz '11er'. It was a great success for the company, which in 1936 was renamed Humboldt-Deutz-Motors. This small tractor went into production worldwide from 1936 to 1951 and 19,000 were produced.

The vehicle was built in the block design and had a water-cooled, one-cylinder diesel engine as well as a mower and belt pulley as standard. With its three-speed gearbox, it could reach speeds of between 2 and 5 mph. These low speeds were quite enough for small farms and the Deutz 11er considerably relieved their workload.

Model:	*Deutz F 1 M 414*
Production period:	*1936–1951*
Hp/kW:	*11/8.1*
Cubic capacity:	*1100*
No. produced:	*19,000*

Deutz F 2 M 315

With considerably more power than the F 1 M 414, the F 2 M 315 was produced from 1934. It had a two-cylinder, four-stroke, diesel engine, which gave it 28 hp and it was more suited to larger agricultural concerns. A previous series of this vehicle came out in 1933 as a basic cultivator. As shown in the photo, these tractors actually had iron wheels. They could travel at a maximum of 4.2 mph. The F 2 M 315 was also very successful, with sales of 11,988.

Model:	*Deutz F 2 M 315*
Production period:	*1934–1942*
Hp/kW:	*28/20.5*
Cubic capacity:	*3400*
No. produced:	*11,988*

Deutz F 2 M 315

This wonderfully preserved example of the two-cylinder, diesel engined Type F 2 M 315 tractor, known as the 'steel tractor', dates from 1939. This model was, for a very long period of time, almost irreplaceable, not only for work in the fields but also on the roads. To a large extent this was due to the innumerable accessories that came with the 2750 kg tractor. It could be fitted with mower drive, mower, belt pulley, power take-off, cable winch, air brakes for trailer attachments, windscreen, mudguards and also a canopy.

Model:	*Deutz F 2 M 315*
Production period:	*1934–1942*
Hp/kW:	*28/20.5*
Cubic capacity:	*3400*
No. produced:	*11,988*

Deutz F 2 M 315

Another feature of the F 2 M 315 was its very short wheelbase of just 1920 mm. Because of the block design method with which it was built, it was extremely compact and robust. In contrast to other, comparable tractors from other producers, its ground clearance was very high, which enabled it to perform maintenance as well as a variety of other tasks. This steel tractor from 1938 is fitted with a windscreen, which was one of the countless accessories coming with this model. The maximum performance of its two-cylinder, four-stroke, diesel engine was 1200 rpm.

Model:	*Deutz F 2 M 315*
Production period:	*1934–1942*
Hp/kW:	*28/20.5*
Cubic capacity:	*3400*
No. produced:	*11,988*

Deutz F 2 M 315

This wonderfully restored steel tractor from 1937 is fitted with a canopy as well as a windscreen. As with all the examples of this model, one cannot fail to notice the cross-sprung front axle. The F 2 M 315 was not only a great sales success in Germany, but there was also a real demand for this model from abroad, since it was often sold with a great variety of accessories – although this did of course increase the cost. However, many farmers in the field did not want to miss out on the comfort of a protective canopy or a windscreen.

Model:	*Deutz F 2 M 315*
Production period:	*1934–1942*
Hp/kW:	*28/20.5*
Cubic capacity:	*3400*
No. produced:	*11,988*

Deutz F 3 M 317

Even at first glance, the largest and best-performimg Deutz model looks tremendously imposing for its era. It is far more powerful and obviously much heavier than the F 2 M 315, which was produced at the same time. However, quality has its price and that is was why it was almost exclusively large farms or lords of the manor that could afford this 50 hp tractor. Since the F 3 M 317 was also excellent on the roads and could hold its own over a period of time, it was very often freight and haulage firms, in other words, non-agricultural industry, that used it as a towing vehicle. The photo shows a superbly restored F 3 M 317, which gave good service to a coal merchant until well into the 1990s. This vehicle has a rigid driver's cab and an air-brake system.

Model:	*Deutz F 3 M 317*
Production period:	*1935–1942*
Hp/kW:	*50/36.6*
Cubic capacity:	*5768*
No. produced:	*8646*

Deutz F 1 L 514/50

The F 1 L 514/50 – here is one from 1951 – can rightly be regarded as the legitimate successor to the F 1 M 414, the 11 hp farmer's tractor. This tractor resembled its predecessor in looks as well as because of its small engine capacity compared to larger models. At any rate, it had a new engine, which was an air-cooled, one-cylinder diesel unit. Many small farmers seized the opportunity to rebuild their businesses after the war and to get themselves their first small tractor, and quite a few of them chose to buy the F 1 L 514/50. This tractor was one of the models that helped push forward the mechanisation of agriculture and remove the draught animals from the fields.

Model:	*Deutz F 1 L 514/50*
Production period:	*1950–1951*
Hp/kW:	*15/11*
Cubic capacity:	*1330*

Deutz F 1 M 414/46

This farmer's tractor F 1 M 414 was produced until 1951. However, instead of resting on its laurels, Deutz went on to make even more improvements to the small tractor. So, after World War II, a four-speed gearbox was fitted, increasing the engine performance by 1 hp to 12 hp. As a consequence of the continual improvements, which included a choke, this farmer's tractor always sold very well to the smaller businesses and expectations for a new model grew. This tractor, which looks almost new, is from 1947.

Model:	*Deutz F 1 M 414/46*
Production period:	*1936–1951*
Hp/kW:	*11–12/8.1–8.8*
Cubic capacity:	*1100*
No. produced:	*19,000*

Deutz F 1 M 414/46

Deutz really had its finger on the pulse at that time. Many small farmers who had worked mostly with draught animals were becoming interested in getting themselves a tractor but they did not want one that was too big for their purposes and, most importantly, it had to be reasonably priced. The versatile F 1 M 414/46 had all the advantages and it was easily manageable, which pleased the farmers who had never had a vehicle before. One can say, therefore, with great justification, that this basic farmer's tractor was the most successful of its time. This lovely tractor with canopy comes from 1948.

Model:	*Deutz F 1 M 414/46*
Production period:	*1936–1951*
Hp/kW:	*11/8.1*
Cubic capacity:	*1100*
No. produced:	*19,000*

Deutz F 1 L 514/51

It was not only on Deutz tractors that a canopy was one of the most popular accessories, since it offered protection not only against rain but also strong sunshine. This tractor from 1951 was fitted with a Fritzmeier canopy. It was nicknamed the Deutz '15er' because of its 15 hp engine and it had a five-speed gearbox, giving it top speeds of 14.3 mph. This vehicle has, on the right-hand side between the axles, a belt pulley and mower drive.

Model:	*Deutz F 1 L 514/51*
Production period:	*1951–1957*
Hp/kW:	*15/11*
Cubic capacity:	*1330*
No. produced:	*36,911*

Deutz F 1 L 514/51

On the right-hand side of this 15 hp tractor from 1956 it is possible to see an attached mower drive and mower bar. Along with 40,000 others, it was one of the most successful tractors of its time and significantly advanced the mechanisation of small and medium-sized agricultural businesses. The tractor was one of those with the new, air-cooled engines. It helped Deutz considerably in making a very good name for itself in the production of air-cooled tractors.

Model:	*Deutz F 1 L 514/51*
Production period:	*1951–1957*
Hp/kW:	*15/11*
Cubic capacity:	*1330*
No. produced:	*36,911*

Deutz F 1 L 514/51

The Deutz '15er' was fitted with smaller back tyres as standard, but, on request, the 8.00-32 range of tyres was available. This enabled it to carry out hoeing and cultivation work better than the traditional version. At this time, Deutz used the unit assembly system to build tractors. Each type of tractor was fitted with a variety of strong, air-cooled engines, after which the tractors were named and, amongst these, it was the F 1 L 514 which was the smallest with its 15 hp.

Model:	*Deutz F 1 L 514/51*
Production period:	*1951–1957*
Hp/kW:	*15/11*
Cubic capacity:	*1330*
No. produced:	*36,911*

Deutz F 2 L 514/50

Medium-sized businesses were the main target group for this tractor. The traditional design of the F 2 L 514/50 had a weight of 1850 kg and the back wheels were size 11-28. This vehicle from 1951 provided 30 hp whereas the air-cooled, two-cylinder, diesel engines of the previous models were only 28 hp. The F 2 L 514/50 was a new design and quite different from the old designs.

Model:	*Deutz F 2 L 514/50*
Production period:	*1950–1953*
Hp/kW:	*28–30/20.5–22*
Cubic capacity:	*2660*
No. produced:	–

Deutz F 2 L 514/50

The F 1 L 514/50 had a high back wheel design – they were size 11-38, which Deutz employed in its range from 1950 for three years. Its two-cylinder, 50 hp diesel engine was complemented with an A 15, five-speed gearbox by ZF, as well as a double-sprung front axle. This vehicle from 1952 is also fitted at the back with spoke wheel inserts.

Model:	*Deutz F 2 L 514/50*
Production period:	*1950–1953*
Hp/kW:	*30/22*
Cubic capacity:	*2660*
No. produced:	–

Deutz F 3 L 514/51

This model was the next size up in this generation of tractors and had a three-cylinder, diesel engine, with air-cooling and a performance of 40 or 42 hp, later increased to 45 hp. Here is an example from 1954 with a Fritzmeier roof. It was designed, above all, for medium-sized but also the larger agricultural concerns. The engine had a Deutz injection pump and the gearbox had five forward and one reverse gear but a crawling gear was also available on request and this enabled very low speeds when travelling in first and second gear.

Model:	*Deutz F 3 L 514/51*
Production period:	*1951–1956*
Hp/kW:	*42/30.7*
Cubic capacity:	*3990*
No. produced:	–

Deutz F 3 L 514/6

This was not a completely new design but rather a further development of the F 3 L 514/51, and here is an example from 1958. One novelty, however, was the gearbox. This was a seven-speed, ZF gearbox, which was considerably more resilient than the old steel version. The performance of its three-cylinder engine was increased slightly to 45 hp and later was increased to 50 hp. The differential lock was placed into the back axle and the power take-off shaft went into the middle.

Model:	*Deutz F 3 L 514/6*
Production period:	*1956–1958*
Hp/kW:	*45/32.9*
Cubic capacity:	*3990*
No. produced:	–

Deutz F 4 L 514/4

At 60 hp, this vehicle was the most powerful tractor of its time. It was designed, above all, for work in larger agricultural concerns and could carry out the heaviest of tasks over a long period of time. The performance of its four-cylinder engine was increased by 5 hp in the following model, due to its increased engine speed. It was constructed using the half-frame design and had a five-speed gearbox. A total of 7824 of the F 4 L 514/4 and its successor were produced.

Model:	*Deutz F 4 L 514/4*
Production period:	*1952–1957*
Hp/kW:	*60/43.9*
Cubic capacity:	*5322*
No. produced:	*7824*

Deutz F2 L 612/4

A Type FL 612 two-cylinder, diesel engine with 22 hp did the work under the bonnet of this model from 1954. Several old, tried-and tested details were taken from the F 1 L 514, like the gearbox, steering and front axle. The vehicle had a three-point hydraulics system as standard as well as a single clutch. It had nine forward as well as two reverse gears thanks to an auxiliary gearbox built into the clutch housing.

Model:	*Deutz F 2 L 612/4*
Production period:	*1954–1956*
Hp/kW:	*22/16.1*
Cubic capacity:	*1526*
No. produced:	–

Deutz F 1 L 612/4

This vehicle had not only a new engine but also a new gearbox when it was introduced in 1953. The drive unit consisted of a newly developed FL 612 engine, first introduced in 1952, which for this model gave a performance of 11 hp. It was therefore advertised as the new version of the tried-and-tested farmer's tractor, which Deutz hoped would bring great marketing opportunities. The six-speed gearbox was highly visible behind the tractor's back axle, which was at that time in the modern wasp-waist shape, thus giving the chance to put in an idler axle.

Model:	*Deutz F 1 L 612/4*
Production period:	*1953–1958*
Hp/kW:	*11/8.1*
Cubic capacity:	*763*
No. produced:	–

Deutz F 1 L 712

Not just 11 hp but now over 13 hp was delivered by this 830 kg small tractor, the successor to the F 1 L 612/4. It had an engine unit from the improved FL 712 series and was named after it. Its gearbox had six forward and three reverse gears, which made work a lot easier. Here is a picture of a vehicle from 1958 with a mower attached at the side.

Model:	*Deutz F 1 L 712*
Production period:	*1958–1959*
Hp/kW:	*13/9.5*
Cubic capacity:	*850*
No. produced:	–

Deutz D 15

Tractor-lovers had to change their mind-sets a little from 1959. From this time on, Deutz no longer named its tractors after their engine types but instead according to the approximate horsepower of their engines. This vehicle had a one-cylinder, F 1 L 712 engine unit with air-cooling and was the rightful successor to the F 1 L 712 – in other words, a tractor particularly aimed at small businesses. It also had a six-speed, A04 gearbox from ZF.

Model:	*Deutz D 15*
Production period:	*1959–1964*
Hp/kW:	*14/10.2*
Cubic capacity:	*850*
No. produced:	–

Deutz D 25.1 S

As the 'new' Deutz designation suggests, this model has a two-cylinder, FL engine with 25 hp. It is only slightly dissimilar from its predecessor, the D 25 S, which in its turn was the successor to the F 2 L 615/5. Basically it was the outer details that were changed. The performance details of the D 25.1 S were no longer just painted on but actually embossed on the bodywork. This vehicle is fitted with a M210 Fritzmeier all-weather canopy and was built in 1960.

Model:	*Deutz D 25.1 S*
Production period:	*1959–1960*
Hp/kW:	*25/18.3*
Cubic capacity:	*1700*
No. produced:	–

Deutz D 40 UF

It gleams and beams as if it had just come from the production line. This vehicle from 1959 has its own Fritzmeier canopy. These tractors had a 40 hp F 3 L 712 three-cylinder engine and were amongst the more powerful machines of their time, being capable of cultivating areas of up to 25 hectares. They could be easily harnessed to harvesters with power take-off shafts but they were also useful for transport on the roads.

Model:	*Deutz D 40 UF*
Production period:	*1958–1960*
Hp/kW:	*35/25.6*
Cubic capacity:	*2550*
No. produced:	–

Deutz D 25

Back in 1960, the D 25 was a real state-of-the-art model with its swirl chamber, diesel engine Type F 2 L 712 and flywheel radial fan – this is a vehicle from 1961. The last examples of this light, 1325 kg model and the first models of the D series, came onto the market at the start of the 1960s. Standard equipment were a five-speed gearbox with a reverse gear and power take-off shaft. In addition, one could order a three-point mounting suspension system.

Model:	*Deutz D 25*
Production period:	*1958–1960*
Hp/kW:	*20/14.6*
Cubic capacity:	*1700*
No. produced:	–

Deutz D 15 Plantage

The D 15 Plantage came onto the market at the same time as the traditional D 15, but was adapted to make cultivating in rows and specialised cultivation easier. It could, therefore, be put to use in vineyards. This vehicle was referred to by some people as the 'narrow-gauge tractor' because it had an adjustable track width that could be adjusted with the help of special rims and its single-cylinder engine. It could easily manage the most varied types of cultivation. The D 15 Plantage also had the six-speed, A-4P gearbox from ZF.

Model:	*Deutz D 15 Plantage*
Production period:	*1959–1964*
Hp/kW:	*14/10.2*
Cubic capacity:	*850*
No. produced:	–

Deutz D 30

The D 30 first appeared in 1960 and was a tractor mainly suited to medium-sized businesses. It had 28 hp and a newly developed eight-speed gearbox made by the firm itself. As a special accessory, this vehicle – the illustration shows a beautifully restored Deutz D 30 from 1961 – had a Deutz-Transformatic hydraulic system, which had a lifting capacity of 1250 kg.

Model:	*Deutz D 30*
Production period:	*1960–1963*
Hp/kW:	*28/20.5*
Cubic capacity:	*1700*
No. produced:	–

Deutz D 5505

The D-05 series, which came into being in 1965, had an innovative axial, air-cooling fan. This ensured that the new 812 series engines could run more quietly. Most parts of the individual tractors were virtually the same in design, so that changing parts between the models could be done almost seamlessly. The D 5505 had 52 hp and was one of the heaviest machines of this series. It had a Type F 4 L 812 S four-cylinder diesel engine and a mass-balancing unit.

Model:	Deutz D 5505
Production period:	1965–1966
Hp/kW:	52/38.1
Cubic capacity:	3400
No. produced:	–

Deutz D 30 S

This tractor was specially designed for power take-off driven appliances to be attached to it. This powerful model had 30 hp and, specifically for the purpose just mentioned, unlike the traditional D 30 it had a power take-off shaft with duplex clutch. Apart from this, it was very similar in design to its predecessor. It could not actually be used for harvesting because its engine performance was too low. Here is a wonderfully restored vehicle with the M-210 all-weather roof by Fritzmeier and side mower.

Model:	*Deutz D 30 S*
Production period:	*1960–1963*
Hp/kW:	*28/20.5*
Cubic capacity:	*1700*
No. produced:	–

Deutz D 40 L

The D 40 L weighed in at 1450 kg and was therefore exactly 300 kg lighter than its predecessor, the D 40. In looks, however, it did resemble the D 40. It had, similarly, the Deutz-Transformatic hydraulic system as well as a new Deutz eight-speed gearbox under the bonnet. Since it offered very good performance at a comparatively low price, it was one of the best-selling tractors in its class at that time. This model from 1963 also has a safety roll bar.

Model:	*Deutz D 40 L*
Production period:	*1962–1963*
Hp/kW:	*35/25.6*
Cubic capacity:	*2550*
No. produced:	–

Deutz D 8005

Not only did the D 8005 have, as standard, the ZF A 230 eight-speed gearbox with its four reverse gears, it could also be fitted with many more extras on request. Amongst other features was a Bosch ZF hydraulics system with a lifting force of 2200 kg. The air-cooled, six-cylinder, diesel engine with its 80 hp was outstanding; it was also to be found in its successor, the F 4 L 514. This tractor weighed 3720 kg and was amongst those models on the market that were designed for the larger agricultural concerns.

Model:	*Deutz D 8005*
Production period:	*1965–1966*
Hp/kW:	*80/58.6*
Cubic capacity:	*5100*
No. produced:	–

Deutz D 4006

In the same year that the D 3006 came into production, the D 4006 also appeared. Weighing 1895 kg, this was the successor to the D 4005. Indeed, the last examples of the D 4005 did have the Deutz TW 35 gearbox but the air-cooled, three-cylinder, direct injection, diesel engine F 3 L 912 was brand new. It came with a regulated hydraulics system and a vast number of extras were available on request. Amongst these was a gearbox designed so that the driver, even whilst travelling, could use the power take-off shaft independent of the clutch, using a hand lever. This 4006 from 1974 had, in addition, a Fritzmeier all-weather roof and a mower.

Model:	*Deutz D 4006*
Production period:	*1968–1981*
Hp/kW:	*35/25.6*
Cubic capacity:	*2826*
No. produced:	–

Deutz D 5206

This vehicle came into production in 1974 and, because of the increase in its engine speed, it produced 51 hp, which was 3 hp higher than its predecessor, the D 5006. The D 5206 had an eight-speed gearbox or, on request, a twelve-speed gearbox with a crawling gear. Both systems had four reverse gears. The basic model of the tractor had rear-wheel drive but there was also a model available with four-wheel drive. Here is a superbly restored model from 1976 with an FK-9200 Fritzmeier all-weather roof.

Model:	*Deutz D 5206*
Production period:	*1974–1981*
Hp/kW:	*51/37.3*
Cubic capacity:	*2826*
No. produced:	–

Deutz Intrac 2002

This was a particularly striking Deutz model, appearing on the market in 1972. Its designers wanted to give the user the opportunity to carry out a variety of tasks, one after the other, without any interruption. Therefore, they developed a pallet above the back axle on which the farmer could transport seeds or fertiliser. A power lift system and a power take-off shaft, both at the front, were amongst the features included as standard, allowing the use of attachments both at the front and at the rear. The driver did not even have to get out of his seat to hitch up the attachments, since the Intrac had a fast coupling system. The Intrac 2002 had an air-cooled, three-cylinder, F 3 L 912 diesel unit and the gearbox was the TW 50.3, with twelve forward and three reverse gears, which were already included in the D 5006. The Intrac underwent continuous improvements until 1991 and then production was stopped; further success in the market was denied it because, amongst other things, the market was saturated. This restored Intrac from 1974 is one from the first series built.

Model:	*Intrac 2002*
Production period:	*1972–1974*
Hp/kW:	*51/37.3*
Cubic capacity:	*2826*
No. produced:	–

DX 120

The Deutz tractors of the DX series came onto the market in 1978. Under the bonnet was a new series of drive units, the FL 913, which were significantly better in performance than the ones in the previous series. The Deutz TW gearbox, which on the DX 120 came with either fifteen or twenty forward gears and five reverse gears, was another new development. The six-cylinder, four-stroke, naturally aspirated Type F 6 L 913 diesel engine on the DX 120 gave 110 hp. The vehicle was available with either back-wheel or four-wheel drive. Here is a four-wheel drive model, which weighed 4885 kg.

Model:	*DX 120*
Production period:	*1980–1983*
Hp/kW:	*110/80.5*
Cubic capacity:	*6128*
No. produced:	–

DX 3.50 F

With this vehicle, Deutz answered the prayers of the fruit and wine growers for a modern tractor to be used on plantations. Deutz placed great store when building this vehicle on manoeuvrability, as well as a strong performance. Under the bonnet lay a 60 hp, air-cooled, diesel engine: the F 3 L 913. The customer could choose a TW 550 gear system with either eight or twenty-four forward gears and four or eight reverse gears. The standard DX 3.50 F had rear-wheel drive but a four-wheel drive version was also available. The latter weighed 2350kg. Accessories included an Edscha driver's cab. After the DX 3.50 F, Deutz only brought out one more narrow-gauge tractor and this was the DX 3.70 F.

Model:	*DX 3.50 F*
Production period:	*1987–1995*
Hp/kW:	*60/43.9*
Cubic capacity:	*3060*
No. produced:	–

Agrotron 200 MK 3

This vehicle weighs 7500 kg and is a true heavyweight amongst tractors. Thanks to its 200 hp, six-cylinder, BF 6 series diesel engine, it is extremely powerful and high-performance. The driver's cab in this monster has an almost unimpeded area of vision and enjoys air-conditioning and easy-to-reach, clearly arranged controls.

Model:	*Agrotron 200 MK 3*
Production period:	*since 2000*
Hp/kW:	*200/146.4*
Cubic capacity:	*7146*
No. produced:	–

Eicher

The Eicher brothers had been in the tractor business for quite a long time, but after World War II they really came into their own. They had a flair for judging what was just right for the time and what the farmers needed, and they brought a magnificent level of innovation to the market. One of their tractors was the first production model in the world to have air-conditioning: the Eicher ED 16. It did very well with the customers and the EKL 15, with its many standard accessories, did even better and became one of the most sold tractors in Germany in the 1950s. But the company did not rest on its laurels and in 1958 brought out its Predator models. These models were high-performing tractors like the Tiger, Leopard, Bengal Tiger and Mammoth. So, Eicher was still experiencing success in the 1960s but did not manage to continue this success into the 1970s.

Eicher ED 16

This vehicle came onto the market in 1948. It was a diesel tractor with an air-cooled, 16 hp engine that sold well and contributed to the advancement of mechanisation in agriculture, especially for the smaller businesses. It had a four-speed gearbox, which was changed to a five-speed gearbox in the subsequent model, the ED 16 II.

Model:	*Eicher ED 16/II*
Production period:	*1948–1953*
Hp/kW:	*16/11.7*
Cubic capacity:	*1425*
No. produced:	–

Eicher ED 22/I

This vehicle had a top speed of 9.3 mph – here is one from 1949. The company originally introduced it to the market in 1938, but the one that came out in 1945 had a new, four-speed, ZF gearbox. Its two cylinder, Deutz F 2 M 414 diesel engine was water-cooled and had 22 hp, which a while later was increased to 24 hp. The ED 22/II model was basically identical to the 22/I but did have bigger tyres with size 8-20 back wheels.

Model:	*Eicher ED 22/I*
Production period:	*1945–1950*
Hp/kW:	*24/17.6*
Cubic capacity:	*2198*
No. produced:	–

Eicher ED 25/II

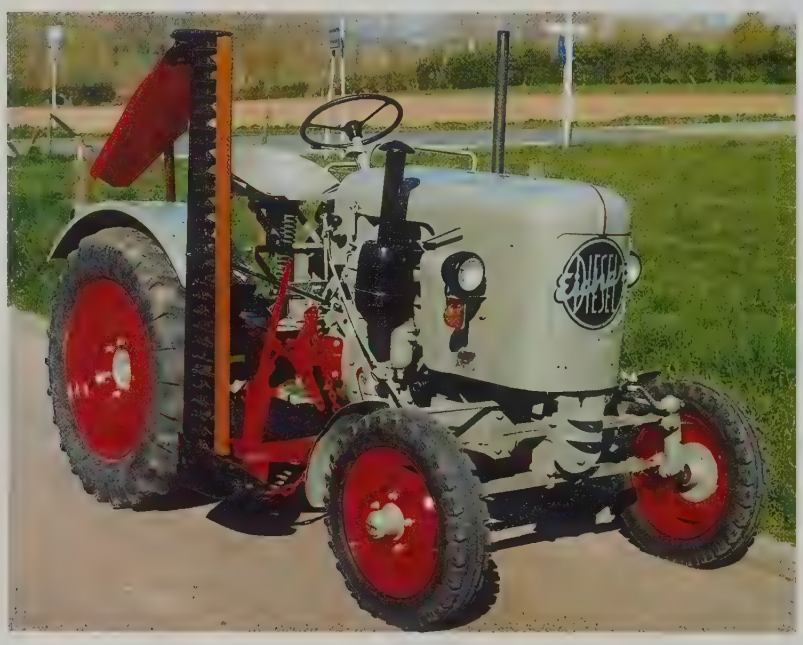
The Eicher tractors normally had Deutz engines and this was the case with the ED 25/II, which was built from 1950 to 1954. It had a two-cylinder, Deutz diesel engine, the F 2 M 414, which gave it 25 hp and allowed it a maximum speed of 11.9 mph. Its four-speed gearbox came from the Renk company (which makes gear systems in Augsburg, Germany). The standard model weighed 1810 kg and had a sprung steering shaft.

Model:	*Eicher ED 25/II*
Production period:	*1950–1954*
Hp/kW:	*25/18.3*
Cubic capacity:	*2198*
No. produced:	–

Eicher ED 22

The features of the ED 22 included a sprung steering shaft and a Hurth gearbox with five gears. Thus it differed from the single-cylinder ED 16/II only in terms of stronger engine performance. Whilst the engine of the ED 16/II had 19 hp, the ED 22 could manage 22 hp. This increase was only possible because of the larger size of the cylinder boring. This magnificently restored vehicle built in 1955 and weighing 1200 kg was used for basic cultivation; it has size 8-12 back tyres.

Model:	*Eicher ED 22*
Production period:	*1955–1958*
Hp/kW:	*22/14.6*
Cubic capacity:	*1557*
No. produced:	*1962 (from 1955)*



Eicher EKL 15/II

The first Eicher model to have a hinged bonnet was the small EKL 15/I, which became a great sales success. Its one-cylinder engine with air-cooling produced 15 hp but this was soon increased to 16 hp. Like the ED 22, the EKL 15/II had the Hurth five-speed gearbox. This vehicle with side mower comes from 1954.

Model:	*Eicher EKL 15/II*
Production period:	*1953–1958*
Hp/kW:	*16/11.7*
Cubic capacity:	*1425*
No. produced:	*10,359 (from 1955)*

Eicher L 22/II

Eicher actually made comparatively few of this type of vehicle. One reason for this was that they were forced to rely on the Deutz F 2 L 612 engine with its 22 hp, since they could not get to grips with the production of their own air-cooled engines. With the L 22/II, Eicher tried to overcome delivery problems. The tractor actually had a Hurth five-speed gearbox.

Model:	*Eicher L 22/II*
Production period:	*1954–1958*
Hp/kW:	*22/16.1*
Cubic capacity:	*1526*
No. produced:	*615 (from 1955)*

Eicher L 28

This vehicle was produced between 1950 and 1958, at first with 28 hp and then later with 30 hp, and was a vehicle that could be used by medium-sized businesses. It had a two-cylinder, Deutz F 2 L 514 engine and, from the point of view of its design, was almost identical to the two-cylinder Deutz tractor. From 1955, 413 were produced with the ZF five-speed gearbox. Here we see one from 1954.

Model:	*Eicher L 28*
Production period:	*1950–1957*
Hp/kW:	*30/22*
Cubic capacity:	*2660*
No. produced:	*413 (from 1955)*

Eicher LH 12

This vehicle was remarkable because of its particularly low weight of 770 kg. This made it the lightest tractor that Eicher had ever produced. It did not have an Eicher engine but instead had a Hatz one-cylinder, diesel engine with air-cooling and a ZF six-speed gearbox. The steering axle was somewhat rigid, but at least it did have a three-point hydraulic system.

Model:	*Eicher LH 12*
Production period:	*1956–1959*
Hp/kW:	*12/8.8*
Cubic capacity:	*667*
No. produced:	*1130*

Eicher E 17

The E 17, like this lovely example from 1957, was fitted out with size 9-24 back wheels as standard. Its design was almost identical to the standard EKL 15/II tractor and was exclusively made for export. Eicher produced goods for the German market but recognised that, from an economic point of view, it was not possible to ignore foreign markets. The normal verified weight of this small tractor was 1850 kg.

Model:	*Eicher E 17*
Production period:	*1953–1958*
Hp/kW:	*16/11.7*
Cubic capacity:	*1425*
No. produced:	–

Eicher L 40/I

This wonderfully restored example from 1955 looks like it has just come off the production line. Until 1954, this was the best-performing and so the most expensive model from Eicher. The letter L in the name indicates that the tractor's engine was not built by Eicher itself. This vehicle had a three-cylinder, F 3 L 514 engine with 42 hp at first and , later, 45 hp. It weighed 2340 kg and had a ZF five-speed gearbox with a crawling gear.

Model:	*Eicher L 40/I*
Production period:	*1951–1957*
Hp/kW:	*42–45/30.7–32.9*
Cubic capacity:	*3990*
No. produced:	*109 (from 1955)*

Eicher L 60

This vehicle was introduced in 1954 and at that time was the best-performing tractor ever produced by Eicher. It had a four-cylinder, Deutz F 4 L 514 engine with air-cooling and 60 hp. Like the Deutz tractor with the same engine performance, the L 60 was built using the half-frame design system. However, only 88 L 60s were built because it was not a particularly versatile tractor and it was also very expensive. It should be stressed, however, that it was one of the biggest tractors of the 1950s.

Model:	*Eicher L 60*
Production period:	*1954–1958*
Hp/kW:	*60/43.9*
Cubic capacity:	*5322*
No. produced:	*88 (from 1955)*

Eicher ED 50/I

Large tractors were not especially popular in the 1950s, mainly because of their high price, and this seems likely to be the reason why only 46 were produced of this particular 50 hp vehicle. It was a high-performing vehicle with an air-cooled, three-cylinder Deutz ED 3 engine with two crawling gears in addition to the five forward and two reverse gears. This powerhouse weighed in at 3075 kg.

Model:	*Eicher ED 50/I*
Production period:	*1957–1959*
Hp/kW:	*50/36.6*
Cubic capacity:	*4671*
No. produced:	*46*

Eicher EM 100 Leopard

The Leopard tractor, which appeared in 1960, was part of a series known as the 'Predators' Pride'. It had an air-cooled, one-cylinder, EDK diesel engine, which gave it 15 hp. This made it the smallest of the new tractors. It weighed only 1064 kg and had six forward and two reverse gears. The model shown here is from 1965 and was very similar in looks to the other models in the series. In 1962, the Leopard was redesigned so that it looked like the other tractors.

Model:	*Eicher EM 100 Leopard*
Production period:	*1960–1966*
hp/kW:	*15/11*
Cubic capacity:	*981*
No. produced:	*5371*

Eicher EM 200 Tiger

This was the second model in the Predator series and amongst its innovations was the eight-gear ZF transmission with gear stick change, which replaced the former sliding gear system. Initially it had a weight of 1460 kg, but when the performance of the engine was increased from 25 hp to 28 hp in 1962, its weight increased to 1600 kg. In addition, the power of the hydraulic lifting system was increased by 150 kg to 1000 kg. The engine unit this time came from Eicher itself. It was a two-cylinder, EDK, diesel engine with air-cooling. Around 15,000 Tigers were produced – here is one from 1964 – making it one of the most successful, medium-sized tractors of its time.

Model:	*Eicher EM 200 Tiger*
Production period:	*1958–1968*
hp/kW:	*25–28/18.3–20.5*
Cubic capacity:	*1963*
No. produced:	*15,292*

Eicher EM 300 Königstiger

This powerhouse amongst the Predators was produced from 1959 and had a performance of 35 hp. It had an Eicher engine, which was an air-cooled, three-cylinder EDK 3 with an engine speed of 2000 rpm. Another of Eicher's top of the range models was the ED 310 Mammut, which had 10 hp more than the Königstiger. Eicher redeveloped the latter in 1962 to include a ZF gearbox system with eight forward and four reverse gears and also increased its engine performance. The vehicle – here is one from 1961 with safety roll bar and side mower – had a top speed of 12.4 mph.

Model:	*Eicher EM 300 Königstiger*
Production period:	*1959–1962*
hp/kW:	*35/25,6*
Cubic capacity:	*2944*
No. produced:	*19,422 (until 1968)*

Eicher EA 400 Königstiger

This four-wheel drive version of the Königstiger was introduced in 1963 and originally had a 40 hp three-cylinder, diesel engine and an eight-speed gearbox with four reverse gears, giving it speeds of up to 12.4 mph. It weighted 2150 kg. Later an extra high gear was added, increasing its speed by 5 mph. The tractor shown here is from 1964.

Model:	*Eicher EA 400 Königstiger 4WD*
Production period:	*1963–1968*
hp/kW:	*40/29.3*
Cubic capacity:	*2944*
No. produced:	*1050*

Eicher EM 500 Mammut I

One of the innovations on this model was the four-cylinder, EDK diesel engine, the EDK 4. This engine, which was at first built for the higher performance Mammut II, was adapted for the Mammut I so that it produced 10 hp less. The three-cylinder ED 3 engines from the "old" Mammut series had served their purpose. The EM 500 Mammut I weighed 2525 kg and was fitted with a ZF gearbox, which had eight forward and four reverse gears. This beautifully restored vehicle left the factory in 1968.

Model:	*Eicher EM 500 Mammut I*
Production period:	*1964–1968*
hp/kW:	*50/36.6*
Cubic capacity:	*3927*
No. produced:	*692*

Eicher 3014 Wotan II

This vehicle was named after the supreme god of the Germanic peoples. The choice of the name indicates that we are dealing with the four-wheel drive, top model of the 3000 series, introduced in 1968. The engines in the original vehicles in the series had 95 hp and from 1973 this became 100 hp. The ZF gearbox had 16 forward and 7 reverse gears as well as an extra fast gear, which meant that this 'muscle man' could reach speeds of up to 17.7 mph. The Wotan II weighed 4200 kg and its hydraulics system had a maximum lifting force of 3200 kg. This 95 hp model comes from 1969 and looks almost new.

Model:	*Eicher 3014 Wotan II 4WD*
Production period:	*1968–1976*
hp/kW:	*95–100/69.6–73.2*
Cubic capacity:	*5890*
No. produced:	*2697*

Eicher ES 202 Puma I

Eicher introduced the Puma in 1960 as its first, real narrow-gauge tractor. Eicher staked its good reputation on these narrow-gauge tractors, a reputation previously gained through the production of standard tractors and equipment carriers. The successor to the Puma, the ES 202 Puma I, produced from 1965, had an air-cooled, two-cylinder, diesel engine with 30 hp. It weighed 1200 kg and had a ZF six-speed gearbox. The headlights of the new Puma were integrated into the bonnet in contrast to its predecessor. In less than five years, 3680 of this model were produced.

Model:	*Eicher ES 202 Puma I*
Production period:	*1965–1970*
hp/kW:	*30/22*
Cubic capacity:	*1963*
No. produced:	*3680*

Eicher 3105

These 3000 series models were introduced in 1978 with three and four-cylinder engines. From an external point of view they were a completely new design and looked much more angular than their predecessors, which had rounded bonnets. The 3105 was one of these vehicles. It weighed 4780 kg – here is an example from 1978 with a driver's cab – and it had Eicher's own six-cylinder, 105 hp EDK 6-4 diesel engine with a transmission of 16 forward and 7 reverse gears. In the production years between 1978 and 1982, 55 3105s were made.

Model:	*Eicher 3105*
Production period:	*1978–1982*
hp/kW:	*105/76.9*
Cubic capacity:	*5890*
No. produced:	*55*

Eicher 2100

Almost exactly the same in design as the Hürlimann H-4105 Elite, which had been marketed by the Italian company SAME, was the Eicher 2100 with four-wheel drive, produced between 1990 and 1991. Only the blue paintwork distinguished it from its rival. It had an SLH diesel engine with water-cooling and a turbocharger and produced 103 hp using its built-in SLH gearbox. It had a top speed of 24.85 mph and was only produced in small quantities, even though it was excellent for use on the roads.

Model:	*Eicher 2100 4WD*
Production period:	*1990–1991*
hp/kW:	*103/75.4*
Cubic capacity:	*4000*
No. produced:	–

Fahr

The Fahr company did not develop its own engines for its tractors because they believed this would not be cost-effective. Instead they made a choice according to the type of tractor between the tried-and-tested firms of Deutz, Güldner, Daimler-Benz and MWM. Normally, Fahr tractors in the Europa series had Güldner engine units (apart from the Type 177, which had a Daimler-Benz engine), because the two companies, the Fahr engineering works and the Güldner motor works in Aschaffenburg, developed this series together. The components were made partly in Aschaffenburg and partly in Gottmadingen in Baden. This saved time and money, which was important as the German tractor manufacturers had noticed increasing pressure from foreign firms on the German market. In addition, the need for tractors was no longer as urgent as it had been immediately after World War II. The tractors produced by Fahr and Güldner could only be distinguished by the shape and paintwork of the bonnet. It was Fahr who finally ended the partnership.

Fahr F 22

This vehicle was the first to come from the Fahr AG factory at Gottmadingen in Baden and was in production from 1938. It gave 22 hp, which was at that time a good performance. It could be used with most of the agricultural appliances on the market at that time and this made it extremely versatile. It was also very flexible and robust.

Model:	*Fahr F 22*
Production period:	*1938–1942*
hp/kW:	*22/16.1*
Cubic capacity:	*2198*
No. produced:	–

Fahr HG 25

This vehicle was introduced in 1942. It used wood gas as fuel, producing 25 hp, and was equipped with the EG 60 unit generator. At this time, the building of wood gas tractors had been ordered by the state. The drive unit was a two-cylinder engine from Deutz or Güldner, according to the customer's wishes. The cubic capacity of both engines was around four litres and so the vehicle was somewhat larger than a comparable tractor with a diesel engine. About 75 kg of wood was needed to operate this generator tractor for between 4 and 5 hours.

Model:	*Fahr Generator Tractor HG 25*
Production period:	*1942–1948*
hp/kW:	*25/18.3*
Cubic capacity:	*3980/3882*
No. produced:	–

Fahr D 12 N

Introduced in 1952, this vehicle – here is a lovely example from 1954 – incorporated a one-cylinder engine built in Aschaffenburg by Güldner. It had 12 hp, which was the performance required at that time from a small tractor. This tractor, which was designed to help the mechanisation of small businesses, was produced with a wasp waist design, allowing for an idler axle. The ZP gear system factory in Passau contributed the five-speed gearbox.

Model:	*Fahr D 12 N*
Production period:	*1952–1954*
hp/kW:	*12/8.8*
Cubic capacity:	*815*
No. produced:	–

Fahr D 25 N

production series. On the one hand it was robust, on the other it was reliable, and it had a pendular axle with a portal axle at the back. This tractor was also fitted with an all-weather roof and size 10-28 back wheels.

Model:	*Fahr D 25 N*
Production period:	*1951–1953*
hp/kW:	*25/18.3*
Cubic capacity:	*2198*
No. produced:	–

Fahr D 17 N

Introduced in 1953, this vehicle comes from the series of small tractors produced by Fahr, having a water-cooled, two-cylinder, Güldner 17 hp diesel engine and a five-speed ZP gearbox; it weighed only 1230 kg. This one from 1953 shows the side mower fitted as standard. A high-wheel version was available.

Model:	*Fahr D 17 N*
Production period:	*1953–1955*
hp/kW:	*17/12.4*
Cubic capacity:	*1296*
No. produced:	–

Fahr D 90 H

This vehicle, aimed mainly at small concerns, began production in 1953. The D 90 H weighed 1130 kg, which was somewhat more than the standard model. It had a one-cylinder, four-stroke, MWM AKD 12 E diesel engine with air-cooling, providing 12 hp. It was produced in the block design. This superbly restored model from 1955 had size 7-30-AS back wheels.

Model:	*Fahr D 90 H*
Production period:	*1953–1956*
hp/kW:	*12/8.8*
Cubic capacity:	*905*
No. produced:	–

Fahr D 88

The Fahr D 88, which came onto the market in 1956, had a wasp waist design in order to allow for an idler axle. This tractor was aimed above all at smaller businesses but was also used by some medium-sized businesses as a second tractor. Its air-cooled, two-cylinder, four-stroke, Güldner combustion chamber process diesel engine initially provided 13 hp, but this was increased to 15 hp.

Model:	*Fahr D 88*
Production period:	*1956–1960*
hp/kW:	*13–15/9.5–11*
Cubic capacity:	*885*
No. produced:	–

Fahr D 177 S

This Type 177 tractor had a water-cooled, four-cylinder, four-stroke, Daimler-Benz OM 636 diesel engine, which was also installed in the Unimog and had 34 hp, signifying the top model in the Europa series. The three other models had 15, 20 and 25 hp. The D 177 had a low centre of gravity and had an array of standard special features, including a power take-off shaft, a differential lock and single-wheel steering brakes. Its ZP A 208 group transmission system had 12 forward gears. Naturally, also available was a range of extras, like ballast weights, a hydraulic power lift from Fahr-Bucher with a lifting power of 1300 kg, a sprung front axle, a rope cable, front wheel mudguards, a front loader, a belt pulley, a twin steering system with tyre pressure enhancement unit, a mower and an all-weather roof. Built from 1960, here is one from 1961 with side mower. The D 177 S was fitted additionally with a fast gear, which meant speeds of 17.6 mph.

Model:	*Fahr D 177 S*
Production period:	*1960–1962*
hp/kW:	*34/24.9*
Cubic capacity:	*1767*
No. produced:	–

Fendt

The first Fendt tractors came on the scene in 1930. The company built its first grass mowers in 1928 by hand, and two years later the F 9 small tractor followed. Just after the war the Fendt Dieselross F 15 appeared; it was good timing, since such a vehicle, which could be used by farmers in all manner of ways, was much needed. The name 'Dieselross', which the Fendt company used for almost three decades, disappeared at the end of the 1950s in favour of other, more modern-sounding names. FF was now the abbreviation for the tractors: the firm's name Fendt, followed by 'Fix', 'Farmer', 'Favorit' etc. The firm clearly has a good feel for the needs of the customer and has made innovations to suit these needs, allowing it to occupy the number one place in Germany since 1985 for re-registrations.

Fendt Dieselross F 9

This small tractor had a one-cylinder, four-stroke, diesel engine with steam-cooling and 9 hp, which is rather modest by today's standards. This mower tractor, built using the framework design, had a three-speed gearbox, weighed 1200 kg and had a top speed of 5 mph.

Model:	*Fendt Dieselross F 9*
Production period:	*1930–1937*
hp/kW:	*9/6.6*
Cubic capacity:	–
No. produced:	–

Fendt Dieselross G 25

On the orders of the state, in 1942 Fendt also had to give up making vehicles with diesel engines and change over to the production of wood gas-fuelled tractors. Therefore, the G 25 was built with the new, unit gas engine made by Deutz in Cologne, which was started up using petrol and then was driven by wood gas. The wood bunker of the G 25 had a capacity of 259 litres and on this it could run for three hours. It had 25 hp and weighed 2223 kg. The comparable Fendt Dieselross F 22, which was produced until 1942, weighed only 1555 kg.

Model:	*Fendt Dieselross G 25*
Production period:	*1942–1946*
hp/kW:	*25/18.3*
Cubic capacity:	*3979*
No. produced:	*1497*

Fendt Dieselross F 15 H

Four years after the end of World War II, Fendt produced the Dieselross small tractor with a diesel engine. It had a one-cylinder, four-stroke engine from the Mannheim Motor Works (MWM), with 15 hp. Fendt had already made improvements to it by 1950, including a better front axle and protection for the hubs on the front wheels against dust. The high-wheel design made it suitable as a root crop tractor. The company went on to sell 15,071 of this extremely successful model. This superbly restored vehicle comes from 1954.

Model:	*Fendt Dieselross F 15 H*
Production period:	*1949–1957*
hp/kW:	*15/11*
Cubic capacity:	*1153*
No. produced:	*15,071*

Fendt Dieselross F 15 G 6

This vehicle differed from the standard design of the F 15 in that its gearbox had six forward and two reverse gears, in contrast to the four-speed gearbox of the traditional model. The F 15 also had a great number of accessories. Not only did it have a cable winch, in fact a cable winch for vineyards, but also a three-point power lift and, naturally enough, an all-weather roof was also available. A more rapid transmission could also be provided, allowing a top speed of 14.9 mph. Even in one of the improved standard designs, a speed of 11.8 mph could be achieved. An adjustable track was standard on all models.

Model:	*Fendt Dieselross F 15 G 6*
Production period:	*1949–1957*
hp/kW:	*15/11*
Cubic capacity:	*1153*
No. produced:	*15,071*

Fendt Dieselross F 20

This vehicle appeared in 1951 and 8775 were produced, proving the Fendt manufacturers right in their opinion of how well this medium-sized tractor would sell. This was not only because of its water-cooled, one-cylinder, diesel engine from MWM and its four-speed gearbox, but also, above all, because the F 20 was so versatile, having a variety of back wheel sizes and a well-designed selection of accessories. This example of the 20 hp tractor comes from 1955 and has size 10-28 tyres.

Model:	*Fendt Dieselross F 20*
Production period:	*1951–1957*
hp/kW:	*20/14.6*
Cubic capacity:	*1480*
No. produced:	*8775*

Fendt Dieselross F 12 HL

From 1955, Fendt began building another small tractor, the F 12, which in the HL version had an air-cooled, one-cylinder, MWM diesel engine with 12 hp. This and its six-speed gearbox ensured that the F 12 was relatively powerful for its size and was useful for work on slopes and hillsides. The safety roll bar, which can be seen here on this tractor from 1955 along with its mower, became compulsory in Germany from 1970, because the danger of turning over whilst working on a slope was quite considerable and the roll bar was needed to protect the driver.

Model:	*Fendt Dieselross F 12 HL*
Production period:	*1953–1958*
hp/kW:	*12/8.8*
Cubic capacity:	*905*
No. produced:	*7196*

Fendt Dieselross F 24 L

Fendt also had a great deal of success with this model, which belonged to the next performance class up. The F 24 L had a two-cylinder, MWM diesel engine with 24 hp and 6000 were built. The first model came on the market in 1954, at first with an air-cooled engine and then, one year later, with water-cooling. Here is an air-cooled version from 1956. This vehicle weighed 1385 kg and had a gearbox with six forward and two reverse gears. This enabled it to reach a top speed of 12.4 mph.

Model:	*Fendt Dieselross F 24 L*
Production period:	*1954–1958*
hp/kW:	*24/17.6*
Cubic capacity:	*1810*
No. produced:	*6369*

Fendt Favorit 1

This vehicle was the successor to the F 40 Dieselross and production began in 1958 – here is one from 1959. Its design with the integrated headlights resembled that of the Fix models. It had a three-cylinder, water-cooled, 40 hp diesel engine, which worked using the constant pressure combustion chamber process. The semi-synchronised transmission had been recently developed and included nine forward and two reverse gears.

Model:	Fendt Favorit 1
Production period:	1958–1962
hp/kW:	40/29.3
Cubic capacity:	3120
No. produced:	2769

Fendt Dieselross F 17 W

This vehicle was aimed chiefly at smaller, more rural businesses. It had a 17 hp, two-cylinder, MWM diesel engine, which came with either air or water cooling. It was robust and versatile, weighed 1280 kg, had a six-speed gearbox and a top speed of 12.4 mph.

Model:	*Fendt Dieselross F 17 W*
Production period:	*1956–1959*
hp/kW:	*17/12.4*
Cubic capacity:	*1250*
No. produced:	*2883*

Fendt Fix 2

Fendt brought the 'FF' series onto the market in 1958 and the Fix is one example. It was the smallest model in the new series and came with a water-cooled or air-cooled, two-cylinder, direct injection, diesel engine from MWM and both engines had 19 hp. Despite its low horsepower, this model performed very well and became a sales hit, which probably had quite a lot to do with the variety of features it offered, like the Fendt, three-point, hydraulics system with easy-to-use controls. It weighed 1365 kg and here is one from 1963 with an all-weather roof.

Model:	*Fendt Fix 2*
Production period:	*1958–1963*
hp/kW:	*19/13.9*
Cubic capacity:	*1400*
No. produced:	*9730*

Fendt Farmer 3 S

The Fendt Farmer 3 S belonged amongst the upper, medium sized class of tractors at the time it first appeared. Its special characteristics included the newly developed, Fendt, fully synchronised group transmission, which at its best boasted 13 forward and 4 reverse gears. The engine in this model, introduced in 1966, also ensured that it quickly became a market leader: it had a water-cooled, four-cylinder, four-stroke, diesel engine from MWM with direct injection and 45 hp. The oil-powered, hydraulic clutch, described as turbomatic, ran between the engine and the distributor unit and this meant that this powerful machine could start up without jerking.

Model:	*Fendt Farmer 3 S*
Production period:	*1966–1972*
hp/kW:	*45/32.9*
Cubic capacity:	*2976*
No. produced:	*14,156*

Fendt Farmer 3 S

The Farmer S3 was available as a four-wheel drive model, but it cost a good deal more than the basic model. Many a farmer therefore had to think very carefully whether he should get a four-wheel drive tractor It also came with a power take-off shaft on request. The vehicle weighed 2420 kg and its performance was increased to 48 hp in 1968. The one in the picture, showing its rather box-shaped bonnet, dates from 1967.

Model:	*Fendt Farmer 3 S*
Production period:	*1966–1972*
hp/kW:	*45/32.9*
Cubic capacity:	*2976*
No. produced:	*14,156*

Fendt Favorit 2

This 46 hp vehicle came onto the market in 1959 as a successor to the 40 hp Favorit 1. It had a water-cooled, three-cylinder, diesel engine with direct injection. Its semi-synchronised transmission had ten forward gears, including a fast gear and two reverse gears. This gave a maximum speed of 18.6 mph. The vehicle weighed 2500 kg and here is an example from 1963 with an all-weather roof.

Model:	*Fendt Favorit 2*
Production period:	*1959–1963*
hp/kW:	*46/33.7*
Cubic capacity:	*3120*
No. produced:	*1009*

Fendt F 250 GT

This vehicle was produced from 1970 to 1977 and its standard features included a power take-off shaft with power shift transmission at the front and back, as well as a gearbox with 13 forward and 4 reverse gears plus a fast gear. This made for a top speed of 18.6 mph. The 40 hp drive unit for the equipment carrier was actually an under-floor engine – to be more precise, a three-cylinder, four-stroke, diesel engine with air-cooling, which because of its unusual position did not disturb the driver in any way. This model comes from the last year of production and has a front loader and a cabin with unrestricted vision.

Model:	*Fendt F 250 GT*
Production period:	*1970–1977*
hp/kW:	*45/32.9*
Cubic capacity:	*3120 –*
No. produced:	*4237*

Fendt Farmer 308 LS

This tractor was one of the first models in the 300 series. The original engine had 78 hp and from 1991 this was increased to 82 hp and, later, it rose to 86 hp, which was more powerful than the 305 LS. It had a water-cooled, four-cylinder engine with direct injection, and from 1991 it had a turbocharger, taking some of its energy from the exhaust fumes. The Farmer 308 LS was another Upper Bavarian success story, demonstrated by its 16 years of production. There was a standard version or a four-wheel drive version, the latter being some 200 kg heavier. The gearbox had, at first, 15 and then 21 forward gears and speeds of up to 24.9 mph were possible.

Model:	*Fendt Farmer 308 LS*
Production period:	*1980–1996*
hp/kW:	*78–86/57.1–63*
Cubic capacity:	*4154*
No. produced:	*14,262*

Fendt Farmer 304 LS

This vehicle was first produced in 1982 and proved to be a real sales hit. It was so successful that it was produced until 1996, longer than most of the other tractor models from this company – and most others as well. However, continuous improvements were made throughout the fourteen years of production. At first the vehicle had a gearbox with 15 forward and 6 reverse gears but this was replaced in 1987 by 21 forward and 6 reverse gears. In 1991, turbocharging was used to increase engine performance on both the standard and the four-wheel drive versions up to 70 hp.

Model:	*Fendt Farmer 304 LS*
Production period:	*1982–1996*
hp/kW:	*58–70/42.5–51.2*
Cubic capacity:	*3116*
No. produced:	–

Fendt Farmer 305 LS

The Farmer 305 LS – this one is from 1992 – was the first of four models in the 300 series which appeared in 1980. These vehicles belonged to the more upmarket group of medium-sized tractors and had a synchronised transmission, which originally had 14 forward and 4 reverse gears and then, from 1987, 21 forward and 6 reverse gears. Their water-cooled, four-cylinder, diesel engines with direct injection at first produced 62 hp, and from 1992 this was increased to 70 hp. This made them relatively economical to use. This beautifully maintained vehicle is equipped with a front loader.

Model:	*Fendt Farmer 305 LS*
Production period:	*1980–1993*
hp/kW:	*62–70/45.4–51.2*
Cubic capacity:	*3768/4154*
No. produced:	*7447 (from 1984)*

Fendt F 395 GTA

Fendt had been the market leaders in the building of tractors in Germany since the 1970s and in 1985, the company also became a major producer of equipment carriers, particularly four-wheel drive models. The F 395 GTA was one of these and came onto the market in 1989. It had an air-cooled, six-cylinder, four-stroke, diesel engine with direct injection and a powerful 115 hp. It had a fully synchronised transmission with 21 forward and 6 reverse gears and it could travel at 24.9 mph as long as it had an unrestricted field of view. Its track could be adjusted in seven ways.

Model:	*Fendt F 395 GTA Freisicht-Traktor*
Production period:	*since 1989*
hp/kW:	*115/84.8*
Cubic capacity:	*6129*
No. produced:	–

Fendt Farmer 312

The real powerhouse in the 300 series was the Farmer 312, first built in 1993. It had 125 hp under the bonnet, this being produced by a six-cylinder, four-stroke, diesel engine with water-cooling and an exhaust turbocharger. It was one of the real heavyweights, weighing in at 5200 kg. It had four-wheel drive and an EHS reverse gearbox with 21 forward and reverse gears, which enabled it to travel at 24.9 mph. Fendt actually applied for a patent on the front, sprung axle of the Farmer 312, since it automatically adjusted itself to the load, which impacted on the front axle. If necessary, the driver could also override this suspension element by simply using a button.

Model:	*Fendt Farmer 312*
Production period:	*1993–2000*
hp/kW:	*125/91.5*
Cubic capacity:	*6234*
No. produced:	–

Fendt Favorit Vario 714

This large tractor was introduced in 1998 and was the first to be fitted with an infinitely variable Vario transmission, which could be used when loaded. As well as this, it had a water-cooled, six-cylinder, four-stroke, four valve, 140 hp diesel engine with turbocharger, built by the Deutz firmin Cologne. The design of the Vario series models looked rather angular and even a little clumsy, but as time went on, they became more rounded and modern.

Model:	*Fendt Favorit Vario 714*
Production period:	*since 1998*
hp/kW:	*140/102.5*
Cubic capacity:	*5700*
No. produced:	–

Fendt Farmer 410 Vario

From 1999, not only Fendt's large tractors, but also the middle range were fitted with the infinitely Vario variable transmission technology. There were three models in this middle range. Amongst them was the 410 Vario, right in the middle of the series with a 99 hp engine. The engine unit of the smallest tractor in this series still managed 86 hp and the biggest model gave110 hp. This was through a four-cylinder, four valve, air-cooled turbo diesel engine from Deutz. The tractor in the picture is from 2001, has a front loader and, like all the vehicles of the Type 410 Vario series, has four-wheel drive.

Model:	*Fendt Farmer 410 Vario*
Production period:	*since 1999*
hp/kW:	*99/73.2*
Cubic capacity:	*3800*
No. produced:	–

Fendt Favorit 930 Vario TM 5

From 1999, not only Fendt's large tractors, but also the middle range were fitted with the infinitely Vario variable transmission technology. There were three models in this middle range. Amongst them was the 410 Vario, right in the middle of the series with a 99 hp engine. The engine unit of the smallest tractor in this series still managed 86 hp and the biggest model gave 110 hp. This was through a four-cylinder, four valve, air-cooled turbo diesel engine from Deutz. The tractor in the picture is from 2001,has a front loader and, like all the vehicles of the Type 410 Vario series, has four-wheel drive.

Model:	*Fendt Favorit 930 Vario TM 5*
Production period:	*since 2002*
hp/kW:	*300/219.6*
Cubic capacity:	*6870*
No. produced:	–

Ferguson/Massey-Ferguson

Harry Ferguson made a significant impression on the development of the tractor with his invention of the three-point equipment hitch system. Nevertheless, he always had problems with his partners. He cancelled his cooperation with David Brown and he even had clashes with Henry Ford, culminating in a year-long lawsuit about patents, and there were also disputes within his own company, where he would listen to no one. Since Ferguson played a great part in the construction of Fordson tractors, it is no wonder that Ferguson tractors were very similar. The Irishman had a great deal of success with these small, flexible and reliable tractors. When he sold his firm to Massey-Harris in 1953, over 300,000 Ferguson tractors had been built. The rather cumbersome name of Massey-Harris-Ferguson Ltd was soon changed to Massey-Ferguson and the somewhat dull Ferguson grey colour was combined with the Massey-Harris red. The convergence of these firms did not stop at the production of tractors. At the end of the 1950s, the agricultural vehicle markets came under pressure, and Massey-Ferguson took over Perkins and then Landini. Later on, they amalgamated with the Agco Company.

Ferguson TE 20

In 1946, Harry Ferguson began production of a small, grey 26 hp tractor. He had great success with this tractor even though it was rather unimposing because it was extremely flexible and light. During the few years that this small tractor was being produced, more than 500,000 left the factory. This Ferguson TE 20 is a model from 1952.

Model:	*Ferguson TE 20*
Production period:	*1946–1956*
hp/kW:	*26/19*
Cubic capacity:	*1962*
No. produced:	*Total production over 500,000*

Ferguson TEA 20

From 1948, Ferguson not only built tractors but, to a certain extent, their engines as well. Whilst the TE 20 originally had a Continental engine unit, it got its own Ferguson unit in 1948. This was a four-cylinder, standard Otto engine with water-cooling and 26 hp. The tractor with the firm's own engine was christened TEA 20 and it had great success on the American market. The picture shows a superbly maintained one from 1954.

Model:	*Ferguson TEA 20*
Production period:	*1948–1956*
hp/kW:	*26/19*
Cubic capacity:	*1870*
No. produced:	*Total production over 500,000*

Ferguson TEF

When the driver took his place in one of Ferguson's small grey tractors, he sat directly over the transmission and had to place his feet on the footrests. The four-speed gearbox enabled a top speed of 13.2 mph. The TEF model introduced in 1951 weighed 1225 kg and had a water-cooled, four-cylinder, diesel engine. However, Ferguson still offered tractors with the Otto engine. This TEF from 1954 had the three-point equipment hitch system developed by Ferguson.

Model:	*Ferguson TEF*
Production period:	*1951–1956*
hp/kW:	*29/21.2*
Cubic capacity:	*2095*
No. produced:	*Total production over 500,000*

Massey-Ferguson MF 35

The sale of Ferguson in 1953 to the Canadian company of Massey-Harris was perfect timing. The firm now named itself Massey-Harris-Ferguson. The medium-sized, Ferguson FE 35, a medium-heavy tractor produced from 1956 , was therefore re-named in 1957 as the Massey-Ferguson MF 35. The grey paintwork had also served its purpose by this time. The bonnet, mudguards and seat beamed in a signal red colour but the grey colour was retained on the engine, transmission, radiator guard and wheel rims. There were, however, no further changes made to the model. The diesel engine of the MF 35 had 37.5 hp but those with the Otto engine only had 31.5 hp.

Model:	*Massey Ferguson MF 35*
Production period:	*1956–1960*
hp/kW:	*37.5/27.5*
Cubic capacity:	*2259*
No. produced:	*220,614*

Massey-Ferguson MF 30

In 1959, Massey-Harris-Ferguson joined forces with the biggest producer of diesel engines in the world, the Perkins Group, fitting its new tractors with Perkins engines. The MF 30 began production in 1964 and had a four-cylinder, Perkins, swirl chamber, 4.107 diesel engine, which gave it 30 hp and thus it was classed as one of the smaller medium-sized tractors. Its predecessor, the MF 25, had also used the eight-speed gearbox with two reverse gears, but the ratio was changed to enable it to reach speeds of between 1.1 and 16.7 mph. This wonderfully restored vehicle was built in the first years of production.

Model:	*Massey-Ferguson MF 30*
Production period:	*1964–1972*
hp/kW:	*30/22*
Cubic capacity:	*1753*
No. produced:	–

Massey-Ferguson MF 42

This vehicle, as its name suggests, had a 42 hp, three-cylinder, Perkins diesel engine with water cooling, giving it a top performance of 2250 rpm. It was designed for speeds between 1.1 and 16.7 mph and so was good for using on the roads. It weighed 1650 kg and had a six-speed gearbox with two reverse gears. This MF 42, which looks almost new, comes from 1962.

Model:	*Massey-Ferguson MF 42*
Production period:	*1959–1963*
hp/kW:	*42/30.7*
Cubic capacity:	*2500*
No. produced:	–

Massey-Ferguson MF 185

This vehicle was built from 1971 and one of its features was its eight-speed gearbox with two reverse gears giving it speeds of between 1.4 and 15.5 mph. It weighed 2425 kg. As usual, it had a Perkins engine unit: a water-cooled, four-cylinder, diesel engine, the A 4-248. The size of the back wheels was 13.6-38.

Model:	*Massey-Ferguson MF 185*
Production period:	*1971–1980*
hp/kW:	*68/49.8*
Cubic capacity:	*4062*
No. produced:	*40,096*

Massey-Ferguson MF 133

This vehicle was first introduced in 1962 and from 1965 onwards, it was fitted with power shift transmission: a 'Multipower' gearbox with eight forward and two reverse gears. A number of features came as standard on the MF 133, including re-circulating ball steering, rear drum brakes and, naturally, the MF hydraulics system. It had a three-cylinder, swirl chamber, Perkins A 3.144 diesel engine producing 35 hp. It weighed 1440 kg and from 1965 was part of a series, the 100s, built only at the company's plant in France. This vehicle is one from the first year of production.

Model:	*Massey-Ferguson MF 133*
Production period:	*1965–1971*
hp/kW:	*35/25.6*
Cubic capacity:	*2365*
No. produced:	–

Massey-Ferguson MF 135

The Type 35 was replaced in 1965 by the 135 model, which had the same engine unit as its predecessor, the three-cylinder, Perkins AG 3.152 diesel engine, but its transmission had been given a whole new set of features. The 12 forward gears of the MF 135 – here is one with an all-weather roof and safety frame – enabled speeds of between 1.5 and 21.7 mph. The MF 135 was aimed at the American market and mostly fitted with an Otto engine, the Continental Z 134 with four cylinders and a cubic capacity of 2195 cc.

Model:	*Massey-Ferguson MF 135*
Production period:	*1965–1971*
hp/kW:	*35/25.6*
Cubic capacity:	*2489*
No. produced:	*162,100*

MF 2210

Massey-Harris-Ferguson was eventually taken over by the Agco Company but the MF brand name was retained. One of the models of the compact MF 2200 series is the MF 2210. It has the smallest engine unit of all the tractors in this series, which produce up to 78 hp. It is driven by a modern Perkins engine, which is relatively low in harmful emissions. This model, which is built of lightweight materials, can be used on the land, for forestry work, and for a number of other purposes. It is especially suitable, like the other vehicles in this series, for the cultivation and maintenance of row crops and specialised crops. The MF 2210 has four-wheel drive (like the vehicle in the picture), but also comes as a standard version with rear-wheel drive.

Model:	*MF 2210*
hp/kW:	*54/40*
Cubic capacity:	*2700*

MF 4365

This vehicle was strong yet light and flexible. These were the essential features of the MF 4300 series. They were four-wheel drive models with Perkins engines and 68 to 120 hp. Here is an MF 4365 whose 114 hp engine has 4 cylinders and a Wastegate turbocharger. The engine units have the newly developed Fastram combustion system, which ensures only a small amount of harmful emissions and it even complies with European standards. Another facet of this system, by no means unimportant with regard to modern day fuel prices, is that the engines make better use of their fuel. The low height of the tractor and the fact that the bonnet allows for an unrestricted view ensure that the driver can always see the equipment attached at the front or the front loader.

Model:	*MF 4365*
hp/kW:	*114/84*
Cubic capacity:	*4000*

MF 5465

This vehicle from the 5400 series has a 16/16 or 24/24 fully synchronised reverse gear unit and isavailable with either mechanical or automatic gear change system. The cabins of these vehicles have air-conditioning and great comfort is ensured for the driver by the clear, ergonomic layout of the controls. The Perkins diesel engines with direct injection fulfil the high European standards regarding pollutant emissions.

Model:	*MF 5465*
hp/kW:	*120/90*
Cubic capacity:	*6000*

MF 5465

The top model of the 5400 series is the MF 5465 with its six-cylinder Perkins diesel engine, giving 120 hp due to the electronic injection system and intercooling. The smallest model of this series, which includes a number of particularly flexible tractors with four-wheel drive, has actually only 75 hp. The 5400 series vehicles have a high degree of comfort, are simple to use and handle and match up to the most modern technological standards, from the point of view of both the environment and efficiency.

Model:	*MF 5465*
hp/kW:	*120/90*
Cubic capacity:	*6000*

MF 5435

This is one of the smaller models in this series. Its Perkins diesel engine produces 83 hp. The lifting force of the front power lift is 2.5 tonnes and the one at the back, which has an electronic regulator, goes up to 6 tonnes. As an extra feature, on the four smallest models, there is a bonnet with unrestricted view, which allows a field of vision almost up to the front axle; this is advantageous when using a front loader (see illustration) or equipment attached to the front.

Model:	*MF 5435*
hp/kW:	*83/61*
Cubic capacity:	*4400*

MF 6495

There are six models in the 6400 series by Massey-Ferguson. They all have four-wheel drive and, depending on the model, produce between 94 and 194 hp, although the highest values are only reached when the Power-Boost switch is used. Two engines are used in this series. The top model is the MF 6495 with an engine unit from the Finnish firm SISU. This is a six-cylinder, turbo diesel engine with water-cooling and electronic direct injection as well as a low level of harmful emissions.

Model:	*MF 6495*
hp/kW:	*194/143*
Cubic capacity:	*6600*

MF 6465

Further features of the 6400 series include the Dynashift Plus reverse gear unit, into which a great number of gear changes can be built. All the standard models have the tried-and tested power lift regulator, the MF-HER 4C, enabling heavy loads to be lifted. The three weakest models in the series, from the point of view of their horsepower rating, are fitted with a Perkins turbo diesel engine with electronic injection pump, in contrast to their larger 'colleagues' which have an engine unit of Finnish origins.

Model:	*MF 6465*
hp/kW:	*128/94*
Cubic capacity:	*6000*

MF 8270 Xtra

One of the foremost models from this manufacturer was the MF 8270 Xtra with 261 hp, making it the second most powerful model in the MF 8200 range. The most powerful of the seven models had 288 hp and the smallest made do with 154 hp. Obviously, these powerhouses could manage the heaviest loads and, like models from the other series, had a great variety of uses. Depending on the model they had either a Perkins or SISU high-performance, turbo diesel engine with the Fastram combustion system.

Model:	*MF 8270 Xtra*
hp/kW:	*261/192*
Cubic capacity:	*8400*

Fiat

Fiat's first tractor was produced in 1918 and its predecessor had been a tractor for pulling artillery. Italian farmers loved Fiat's tractors but it was not until 1932 that the company achieved success abroad –with the first modern caterpillar tractor. With the mechanisation of agriculture in Italy after World War II, Fiat became the most significant producers of tractors in the country. The company concentrated on a combination of contemporary technology with good design, from its small tractors to its large ones.

Fiat 25 RD

The small, Type 25 RD tractor came onto the market in 1953. It had a four-cylinder, four-stroke, Otto engine with 25 hp and was above all suited to small agricultural concerns. It was also relatively light, at 1410 kg. This wonderfully restored vehicle is from 1954 and has shell mudguards.

Model:	*Fiat 25 RD*
Production period:	*1953–1955*
hp/kW:	*25/18*
Cubic capacity:	*1901*
No. produced:	–

Fiat 80 R

One of Fiat's top models in the 1950s was the Type 80 R. The engine of this heavy tractor had originally been put into the 70 C caterpillar tractor. It was a water-cooled, four-cylinder, four-stroke, Fiat 604 diesel engine, which had 80 hp. The five-speed gearbox with one reverse gear of this bulky-looking tractor could manage speeds of between 1.5 and 15.5 mph. The tractor weighed 3550 kg and was a better performer in those areas where other tractors did not fare so well.

Model:	*Fiat 80 R*
Production period:	*1961–1968*
hp/kW:	*80/58.6*
Cubic capacity:	*6874*
No. produced:	–

Fiat 221 R

La piccola, the 'little one', was the name given to this 20 hp tractor. Apart from the standard version, which was named the 211 R, and the 251 R four-wheel drive version, this one was given the name of 221 R even though it was a narrow-gauge tractor. This vehicle comes from 1957 and its engine speed was increased to 2330 rpm in contrast to that of the standard version.

Model:	*Fiat 221 R*
Production period:	*1959–1965*
hp/kW:	*20/14.6*
Cubic capacity:	*1135*
No. produced:	–

Fiat 211 R

The small, 211 R tractor had a two-cylinder, 614 diesel engine with water-cooling and, originally, 18 hp. There was also a 211 Rb version, which had a four-cylinder Otto engine with 20 hp, taken from a Simca Aronde car. Its six-speed gearbox had two reverse gears and it managed to reach speeds between 1.2 and 12.6 mph thanks to its power take-off shaft and three-point hydraulics system. Another feature was its rather low weight of 820 kg. A large number of these tractors were produced.

Model:	*Fiat 211 R*
Production period:	*1956–1963*
hp/kW:	*18–20/13.2–14.6*
Cubic capacity:	*1135*
No. produced:	*over 80,000*

Fiat 215 Hi-Crop

The cultivation of maize fields was the main area of work for this high-wheeled special tractor of the Type 215; it was built chiefly for export to America. It was adapted from the standard Fiat 215, built between 1963 and 1968. It had, just like the standard version, a two-cylinder Fiat diesel engine with water-cooling and 20 hp and was somewhat of a lightweight, at 970 kg.

Model:	*Fiat 215 Hi-Crop-Design*
Production period:	*1968*
hp/kW:	*23/16.8*
Cubic capacity:	*1135*

Fiat 540 Spezial

This powerful machine was designed for the harvesting of cultivated fruit. Produced between 1973 and 1978, it was a medium-sized tractor with a water-cooled, three-cylinder, Fiat diesel engine with direct injection and 54 hp. It could reach speeds between 0.5 and 15 mph due to its transmission comprising eight forward and two reverse gears.

Model:	*Fiat 540 Spezial*
Production period:	*1973–1978*
hp/kW:	*54/39.5*
Cubic capacity:	*2592*
No. produced:	–

Fiat 300

The Fiat 300 was introduced in 1972 and was available, on request, with six crawling gears in its six-speed gearbox, a feature that was especially suited to cultivation work. It could manage speeds between 0.3 and 15.5 mph and had a two-cylinder diesel engine with water-cooling, direct injection and 28 hp. So it was not exactly a powerhouse, but it had a sufficiently good performance for smaller and medium-sized concerns. Here is an example from 1972 with an enclosed driver's cab.

Model:	*Fiat 300*
Production period:	*1972–1978*
hp/kW:	*28/20.5*
Cubic capacity:	*1730*
No. produced:	–

Fordson

As with cars, Henry Ford wanted to build tractors that were value for money and easy to use for everyone. The history of the tractor in the USA began in 1918 with the Fordson F. Over one million rolled off the production line. Its block construction design is still prevalent on tractors to this very day. This model was kept basically the same for 30 years, but was continually developed on an individual basis so that the Fordson was always up to date. After World War II, however, it was time for fundamental innovations and the E 27 was introduced.

Fordson F

Like Ford's Model T motor car, the Fordson F tractor became a real sales hit. It was available from 1917 and more than one million were built, but only around 740,000 in the USA. The first of these block design tractors had a four-cylinder, Otto engine with water-cooling and 18 hp. The iron wheels of this tractor had flanged wheels at the front and metal ridges at the back but there were pneumatic tyres available.

Model:	*Fordson F, Tractor*
Production period:	*1917–1928*
hp/kW:	*18/13.2*
Cubic capacity:	*3916*
No. produced:	*739,977 (USA)*

Fordson F

The main features of the F tractor were pneumatic tyres, cast iron rims and shell mudguards. These were mainly for use on the roads but also for pulling other agricultural appliances on the farm. Many haulage contractors swore by the Fordson F for use in agriculture , especially in the USA, where it was particularly popular. It originally had 27 hp, although this was later increased.

Model:	*Fordson F, Road design*
Production period:	*1917–1928*
hp/kW:	*27/19.8*
Cubic capacity:	*4181*
No. produced:	–

Fordson N

This vehicle had 23 hp when paraffin powered and 29 when it used petrol. It came onto the market in 1929. For a while production was in Cork in Ireland, not in Detroit in America. However, this situation did not last long and after only four years, production was moved to Dagenham in England. It weighed 1636 kg and had a different front axle from that of its predecessor.

Model:	*Fordson N, Tractor*
Production period:	*1929–1945*
hp/kW:	*23–29/16.6–21.2*
Cubic capacity:	*4181*
No. produced:	–

Fordson N

Here is a wonderfully restored Fordson N from 1937, with metal ridges on the back set of iron wheels and flanged wheels at the front. This model was based on the original Fordson F, introduced in 1917. The basic building design scarcely changed over a period of 30 years, although the company was continually changing certain details during this time on this very successful tractor.

Model:	*Fordson N*
Production period:	*1933–1945*
hp/kW:	*29/21.2*
Cubic capacity:	*4181*
No. produced:	–

Fordson N

Adjectives like 'robust', 'versatile' and 'reliable' are used to describe the Fordson N and they explain its success, even if its features and fittings did not quite match up to the demands placed on it in the 1940s. As before, it had a rather dated three-speed gearbox, although this was rather irrelevant during World War II: all that mattered at this time was that the machine was solid and did not demand expensive maintenance. For this reason, it continued to be built until 1945.

Model:	*Fordson N*
Production period:	*1933–1945*
hp/kW:	*29/21.2*
Cubic capacity:	*4181*
No. produced:	–

Fordson E 27 N

Some of the first models produced in this series after World War II still had iron wheels with no tyres and so the back wheels have metal ridges. Hardened rubber bands over the wheels ensured that such vehicles could be used on the roads, and here is an E 27 N from 1946 with this type of wheel covering. 236,000 of this design with its 27 hp, four-cylinder, Otto engine were produced – clearly a sales hit.

Model:	*Fordson E 27 N*
Production period:	*1945–1952*
hp/kW:	*27/19.8*
Cubic capacity:	*4184*
No. produced:	*In total 236,000*

Ford 8 N

This all-purpose tractor was developed mainly for use by smaller businesses. The successor to the Ferguson 2 N was built using the block construction method and had a four-speed gearbox, giving it speeds of up to 9.3 mph. A newly developed ten-speed gearbox was available on request and then speeds could be managed of between 1 and 16.1 mph. The water-cooled, four-cylinder, Otto engine could be driven by petrol or paraffin and produced 26 hp. The vehicle weighed 1150 kg and had an adjustable track. Here is aversion example from 1952.

Model:	*Ford 8 N*
Production period:	*1947–1952*
hp/kW:	*26/19*
Cubic capacity:	*1962*
No. produced:	–

Fordson New Major

This striking blue vehicle dates from 1953. The model came onto the market the previous year and was the successor to the E 27 N. Its engine cowling was rounded and it had a four-cylinder, Otto engine or a 40 hp diesel engine produced by the firm itself. However, the version with the Otto engine was only available until 1955.

Model:	*Fordson New Major*
Production period:	*1952–1958*
hp/kW:	*42/30.7*
Cubic capacity:	*3610*
No. produced:	–

Fordson Power Major

This vehicle, with its back wheels of size 11-36, was powered by a six-speed gearbox with two reverse gears. This powerful tractor could manage speeds of between 2.1 and 13.7 mph. The engine was identical to that of the Super Major. This wonderfully restored model is from 1960.

Model:	Fordson Power Major
Production period:	1958–1964
hp/kW:	52/38
Cubic capacity:	3610
No. produced:	–

Fordson Dexta

There were a variety of Fordson Dexta models. There was the standard version with rear-wheel drive, the four-wheel drive version and the narrow gauge design for use in the cultivation of fruit and wine. However, the number of these special models was limited and so this wonderful, narrow gauge tractor from 1958 is today regarded as a rarity.

Model:	*Fordson Dexta Schmalspur*
Production period:	*1958–1965*
hp/kW:	*31/22.7*
Cubic capacity:	*2360*
No. produced:	–

Fordson Dexta

This Ford Dexta from 1960, which looks almost new, has not only a roll bar but also a side mower. This small tractor was not only available in the standard version with a water-cooled, three-cylinder, Perkins direct-injection diesel engine, but there were also narrow gauge and four-wheel drive versions. The standard version weighed 1341 kg and its six-speed gearbox and adjustable track width allowed for speeds of between 1.3 and 15.5 mph.

Model:	*Fordson Dexta*
Production period:	*1958–1965*
hp/kW:	*31/22.7*
Cubic capacity:	*2360*
No. produced:	–

Fordson Super Major

Here is a Fordson Super Major with four-wheel drive from 1962. Ford began to install four-wheel drive on this vehicle, as it did later on the County Tractors series, since it gave it an advantage over the standard version on wet, heavy ground and in the countryside in general. It also had a power-driven front axle and six-speed gearbox with two switching groups, and a four-cylinder Ford diesel engine.

Model:	*Fordson Super Major 4WD*
Production period:	*1959–1964*
hp/kW:	*54/39.5*
Cubic capacity:	*3610*
No. produced:	–

Ford Super Dexta

Here is a wonderfully restored Fordson Super Dexta adorned with flowers. It is a four-wheel drive vehicle and the first models came onto the market in 1960. Its three-cylinder, direct injection, diesel engine, produced by the company itself, had water-cooling and 45 hp. It had an eight-speed gearbox with two reverse gears and speeds between 1.4 and 17.4 mph.

Model:	*Fordson Super Dexta*
Production period:	*1960–1965*
hp/kW:	*45/32.9*
Cubic capacity:	*2868*
No. produced:	–

Ford Dexta 2000

This vehicle, which Ford introduced into its range in 1964, no longer had the rounded design of its predecessors and the bonnet was much more angular. It had a three-cylinder, direct injection, 36 hp diesel engine with water-cooling produced by the company itself. It had six forward gears giving it speeds between 1.6 and 17.8 mph.

Model:	*Ford Dexta 2000*
Production period:	*1964–1972*
hp/kW:	*36/26.4*
Cubic capacity:	*2491*
No. produced:	–

Güldner

Güldner had been a traditional engine manufacturer for years, building engines for tractors and selling them to the tractor manufacturers, and then the firm's management decided to get into this market themselves, since it promised constant growth. The Güldner A 20 came out in 1938 and it was the first tractor completely developed by the company. These high-quality tractors from Aschaffenburg in Bavaria soon developed a good reputation. During the war, it was chiefly wood-gas tractors that were produced. The design was changed after the end of the war. Since the Fahr company was operating in the same way, the firms felt it necessary to co-operate with one another. This meant that tractors from both companies were virtually of the same design. When Fahr quite suddenly broke off the partnership, this meant a change of policy for Güldner. They seized this opportunity with the L 79 engines which they had recently developed. The firm now had the chance to redesign its tractors and also to give them a distinctive type of paintwork.

Güldner A 20

The robust, diesel engined A 20 was the first to be built by the Güldner engine company. It had a water-cooled, one-cylinder, 20 hp diesel engine and came with two transmission systems, each having four forward and one reverse gear. One of the transmissions came from ZF Passau, the other was a Prometheus product. Depending on the size of the transmission, speeds of up to 8 km/h or 9.3 mph could be reached. This beautifully restored A 20 dates from 1941.

Model:	*Güldner A 20*
Production period:	*1938–1942*
hp/kW:	*20/14.6*
Cubic capacity:	*1547*
No. produced:	–

Güldner D 28 U

In 1948 Güldner rebuilt the wood-gas tractors that they had produced during the war but failed to sell, or used parts from them for the production of new tractors. The D 28 U was one of these, the U signifying that it was a model that had been redesigned. It was given a 2F two-cylinder, swirl chamber, diesel engine, with water-cooling, which produced 28 hp.

Model:	*Güldner D 28 U*
Production period:	*1948–1951*
hp/kW:	*28/20.5*
Cubic capacity:	*2598*
No. produced:	*about 150*

Güldner ABN

This vehicle with the Güldner 2 BN, two-cylinder, 25 hp diesel engine was introduced in 1954. It had an adjustable track width and its transmission had six forward gears. It weighed 1420 kg and was therefore heavier than most of the other Güldner tractors to be found on the market.

Model:	*Güldner ABN*
Production period:	*1954–1958*
hp/kW:	*25/18.3*
Cubic capacity:	*1840*
No. produced:	*3626*

Güldner ADS

This model came onto the market in 1954 but its production was halted in the same year when only 356 had been produced. It had an 18 hp water-cooled, two-cylinder, Güldner diesel engine and the customer had a choice of a five or six-speed gearbox. It weighed 1100 kg and its successor was the ALD.

Model:	*Güldner ADS*
Production period:	*1954*
hp/kW:	*18/13.2*
Cubic capacity:	*1305*
No. produced:	*356*

Güldner AX

The 'Sprinter' was the unofficial alternative name for the AX, which was a lightweight at 800 kg. Its wasp waist design enabled the inclusion of an idler axle. It had a one-cylinder, diesel engine made by the company itself and the ZP gearbox also had a crawling gear. It had 11 hp but was not especially successful since most of the smaller businesses had already acquired their own tractors.

Model:	*Güldner AX*
Production period:	*1956–1959*
hp/kW:	*11/8.1*
Cubic capacity:	*636*
No. produced:	*975*

Güldner A 4 M

This vehicle, introduced in 1959, was produced in cooperation with the Fahr company and it was virtually identical with the Fahr D 177 apart from a few details. It was a powerful model – here is one with a roll bar from 1959 – and had a water-cooled, four-cylinder, Unimog OM 636 engine. It weighed 1650 kg and was later known by the more snappy title of the 'Toledo'.

Model:	*Güldner A 4 M*
Production period:	*1959–1961*
hp/kW:	*34/24.9*
Cubic capacity:	*1767*
No. produced:	*2287*

Güldner G 40 A

The G 40 A was first built in 1963 and, typical for Güldner, came with a great number of accessories. These included pneumatic brakes for vehicles with attached equipment, power take-off shaft, dual steering system, tyre pressure enhancer, Güldner-Bosch hydraulics and a rope hoist. There was a four-wheel drive model, which could really impress on virtually impassable terrain. This beautifully restored G 40 A is fitted with a fast gear and a front-loader rocker.

Model:	*Güldner G 40 A*
Production period:	*1963–1969*
hp/kW:	*38/27.8*
Cubic capacity:	*2360*
No. produced:	*1147*

Güldner G 60 S

This vehicle first came out in 1968 and, with 60 hp, was one of Güldner's larger tractors of that era. It was a powerful harvester tractor and came in a four-wheel drive version in addition to the standard design. It had a compact six-cylinder, Type 6 L 79 diesel engine and the ZP twelve-gear A 216 II transmission. This example with a fast gear, hence the S in the name, has back wheels of size 18.4-34.

Model:	*Güldner G 60 S*
Production period:	*1968–1969*
hp/kW:	*60/43.9*
Cubic capacity:	*4712*
No. produced:	*261*

Güldner G 75 A

This G series powerhouse was introduced in 1965. It had a six-cylinder, Type 6 L 79 diesel engine, which gave it at first 65 hp and later, from 1967, this was increased to 70 hp. The four-wheel drive G 75 A had 75 hp and was equipped with a switchable front axle and a rope hoist; it was often used for forestry work. Its T 318 II transmission from ZF Passau had 17 gears, 4 additional crawling gears and 2 reverse gears. This G 75 A, looking as good as new, was built in 1968.

Model:	*Güldner G 75 A*
Production period:	*1965–1969*
hp/kW:	*75/54.9*
Cubic capacity:	*4712*
No. produced:	*201*

Hanomag

When Hanomag first dared to enter the tractor market in 1924 with the WD R 26, the firm had by no means reinvented the wheel. This model clearly harks back to the block construction design of the American Fordson tractors. Only when it introduced diesel engines did the company reach a high position in the list of manufacturers. The engine developed by Hanomag in 1931, with its transverse cam injection pump that works in an oil bath, was the basis for the propulsion of the company's tractors in the following years. The small R 40 tractor, which came after the war, also had this D 52 diesel engine and this is how the company continued in production after the war. Their excellent sales figures were drastically curtailed when Hanomag switched over from the four-stroke engine to the valveless two-stroke engine. Customers were impatient with this technology, which tended to let them down, and so the company returned to the four-stroke engines. In 1958, the structure of the firm changed and so did the insignia. The Hanomag swing was combined with the Rheinstahl arch, as the Rheinstahl company had merged with Hanomag.

Hanomag WD R 26

This vehicle was the first one built by Hanomag. It was built in the block construction design and was very good in the fields as well as on the roads. It had 26 hp, which was very respectable for the times. This WD tractor from 1925 has spoke wheels and a canopy and also has a belt pulley.

Model:	*Hanomag WD R 26, Tractor*
Production period:	*1924–1925*
hp/kW:	*26/19*
Cubic capacity:	*4252*
No. produced:	–

Hanomag WD R 28/32

The WD style of tractor produced by Hanomag from 1924 had already been changed by 1927. The engine could be powered not only by paraffin but also by petrol or benzene, which gave it 30 or even 32 hp. However, being an iron-wheeled tractor, used on the land, it could only reach a speed of 5 mph. At a price of 4800 Reichsmarks, it was one of the dearest tractors on the market.

Model:	*Hanomag WD R 28/32, Tractor*
Production period:	*1928–1932*
hp/kW:	*28–32/20.5–23.4*
Cubic capacity:	*4252*
No. produced:	–

Hanomag WD R 28/32

In contrast to the purely agricultural tractor, which had a speed of 5 mph, this WD could reach a top speed of 9.3 mph, helped by its flexible, but hard, rubber tyres. Its Reihen four-cylinder, double Otto engine gave it a top performance of 1100 rpm. One special accessory was a sand-distributing device, which prevented the drive wheels sliding when the weather was bad or the terrain was difficult. There was also an electric lights system. This example left the factory in Hannover in 1928.

Model:	*Hanomag WD R 28/32, Traffic Design*
Production period:	*1928–1932*
hp/kW:	*28–32/20.5–23.4*
Cubic capacity:	*4252*
No. produced:	–

Hanomag SR 45

This vehicle, introduced in 1936, had a top speed of 17.8 mph and, with pneumatic tyres, was the fastest Hanomag vehicle of its time. It had a maximum weight of 3900 kg, which made it particularly heavy. A pneumatic air brake system was available as an accessory, allowing equipment to be attached.

Model:	*Hanomag SR 45*
Production period:	*1936–1942*
hp/kW:	*45/32.9*
Cubic capacity:	*5195*
No. produced:	–

Hanomag AR 38

Amongst the features of this vehicle, which came onto the market in 1936, were a power take-off shaft and a belt pulley. What was especially striking was the drum-shaped fuel tank in front of the steering column. It had 38 hp and the version for use on the land was available with iron wheels as well as air tyres. This wonderfully restored AR 38 comes from 1940 and it continued to be built until 1942.

Model:	*Hanomag AR 38*
Production period:	*1936–1942*
hp/kW:	*38/27.8*
Cubic capacity:	*5195*
No. produced:	–

Hanomag AR 38

The speeds that the AR 38 could reach depended on the kind of tyres it had. With iron wheels it had a maximum of 5 mph whilst with pneumatic ones it managed 1.5 mph more. It was a robust and comparatively low-maintenance tractor, which made it a great success both at home and abroad. German firms often made export models distinctive by using different colours in their paintwork. This red AR 38 with yellow wheel rims, like all the models this colour, went to Belgium.

Model:	*Hanomag AR 38*
Production period:	*1936–1942*
hp/kW:	*38/27.8*
Cubic capacity:	*5195*
No. produced:	–

Hanomag RL 20

The RL 20 had the company's own car engine and was exceptional value for money, being aimed at those small farmers who had, until now, not been able to afford a tractor. The background to this was that the German government was planning to make country self-sufficient, and thus not having to rely on imported food. A precondition of this was an increase in agricultural production, which would only be possible by mechanisation. The standard vehicle's transmission had four forward gears and one reverse and this made for a maximum speed of 14.9 mph.

Model:	*Hanomag RL 20*
Production period:	*1937–1942/ 1948–1949*
hp/kW:	*20/14.6*
Cubic capacity:	*1911*
No. produced:	*4320*

Hanomag R 40

As standard, the R 40 had pneumatic tyres and a transmission with five gears, giving it a top speed of 11.6 mph and it also had a power take-off shaft. Possible extra accessories were a belt pulley, a canopy and pneumatic brakes. The R 40 with pneumatic tyres was used in the fields as well as on the roads but there was also a version with iron wheels. During the nine-year production period, Hanomag built 12,000, despite the disruption caused by World War II.

Model:	*Hanomag R 40*
Production period:	*1942–1951*
hp/kW:	*40/29.3*
Cubic capacity:	*5195*
No. produced:	*12,000*

Hanomag R 40

One of the main features of the R 40 wood-gas tractor was the generator built on at the side. Hanomag tractors had to be switched to using wood gas during World War II on the orders of the government. The cubic capacity was increased by around 500 cc. so that these tractors could at least get close to the performance of those with diesel engines. Also, the cylinder head was changed and the injection system was actually left out. Here in the picture is one with iron wheels and an Imbert gas-generating system.

Model:	*Hanomag R 40 Holzgas*
Production period:	*1942–1945*
hp/kW:	*40/29.3*
Cubic capacity:	*5702*
No. produced:	–

Hanomag R 40

Because of the lack of other kinds of fuel, German tractor manufacturers were forced to switch the tractors they built during the war to being fuelled by wood. These wood-gas tractors helped considerably in producing sufficient quantities of food to ensure the feeding of the population. This wood-gas vehicle from 1943 can still be driven today using solid fuel and is one of the few remaining models of its kind left.

Model:	*Hanomag R 40 Holzgas*
Production period:	*1942–1945*
hp/kW:	*40/29.3*
Cubic capacity:	*5702*
No. produced:	–

Hanomag R 40 B

After the war, Hanomag, like all the other manufacturers, changed back to using liquid fuels in its tractors. The R 40 B had a D 52 diesel engine produced by the firm itself, which gave it 40 hp. The particular feature of the B model was the electronic starter motor. The letter G, on the other hand, denoted a vehicle that had a petrol starting system. It had the Hanomag transmission with five forward gears and had a top speed of 11.6 mph.

Model:	Hanomag R 40 B
Production period:	1942–1951
hp/kW:	40/29.3
Cubic capacity:	5195
No. produced:	12,000

Hanomag R 455 S

From 1957, Hanomag introduced new model numbers for tractors and the former R 55 now became known as the R 455. However, the appearance and performance of the tractor did not change. This vehicle had a fast gear, hence the S in the name, and a top speed of 16.7 mph. Like many other of these vehicles, this example has an all-weather canopy, which was an additional accessory.

Model:	*Hanomag R 455 S*
Production period:	*1955–1958*
hp/kW:	*55/40.3*
Cubic capacity:	*5702*
No. produced:	–

Hanomag R 460 ATK

The speciality of the R 455 ATK was to start up without jerking, even when loaded, and this was the same for the R 460 ATK, which was similar in design but had greater horsepower. For starting up smoothly, there was an oil-hydraulic fluid or turbo coupling in between the engine and the shift clutch. The R 455 ATK had the tried-and-tested D-57 diesel engine, which produced 55 hp up until 1959 and then 60 hp from 1960. This wonderfully restored R 460 ATK, an item of pure nostalgia for us today, comes from 1962 and has a Benze driver's cab as well as a metal plate at the front and a rope hoist at the rear.

Model:	*Hanomag R 460 ATK*
Production period:	*1952–1964*
hp/kW:	*55–60/40.3–43.9*
Cubic capacity:	*5702*
No. produced:	–

Hanomag R 455 ATK

This vehicle weighed 5200 kg and with its 55 hp was a heavyweight performer that could transport enormous loads. One of the areas in which it was employed was at airports to pull aircraft around but it was also very popular in industry. This example, with the folding roof, comes from 1960, the year in which its performance was increased to 60 hp.

Model:	*Hanomag R 455 ATK*
Production period:	*1952–1964*
hp/kW:	*55–60/40.3–43.9*
Cubic capacity:	*5702*
No. produced:	–

Hanomag R 16 A

This vehicle was distinct from its 'brother', the R 16 B, in the size of its back tyres. It had size 7-36 back tyres, whilst the B had 7-30 tyres. It had a water-cooled, ten-cylinder, four-stroke, 16 hp diesel engine and was Hanomag's smallest tractor at the beginning of the 1950s. The R 16 – here is one from 1956 – had a five-speed transmission that was also available with crawling gears to make it even better for cultivation work in the fields.

Model:	*Hanomag R 16 A*
Production period:	*1951–1957*
hp/kW:	*16/11.7*
Cubic capacity:	*1400*
No. produced:	–

Hanomag R 19

The basis for the R 19, which was introduced in 1953, was the little R 16. Even its D-14 engine was 'borrowed', although the rpm was raised from 1600 to 1975, which increased its horsepower by 3 to 19. The R 19's air filter on the right-hand side was set a little more towards the back than it was on the R 16. The vehicle was in production for four years and then both the R 19 and R16 went into 'retirement'.

Model:	*Hanomag R 19*
Production period:	*1953–1957*
hp/kW:	*19/13.9*
Cubic capacity:	*1400*
No. produced:	–

Hanomag R 28 B

This vehicle came onto the market in 1951, the same time as the R 16. It was based on the R 25 C and D tractors, further proof that at this time Hanomag was still predominantly using the block construction method. The main difference between this vehicle and its predecessors lay in its improved engine performance; in addition, the transmission could be fitted with crawling gears. The R 28 A and B had different sizes of back tyres, the Type B having the smaller ones.

Model:	*Hanomag R 28 B*
Production period:	*1951–1953*
hp/kW:	*28/20.5*
Cubic capacity:	*2799*
No. produced:	–

Hanomag R 28 A

This picture shows an R 28 A from 1951 with spoked wheels, and the larger front and back tyres of this tractor in comparison to the R 28 B are quite evident. Since the R 28 A had a larger ground clearance of 450 mm, it was used for maintenance work. However, it could be used for a multitude of tasks.

Model:	*Hanomag R 28 A*
Production period:	*1951–1953*
hp/kW:	*28/20.5*
Cubic capacity:	*2799*
No. produced:	–

Hanomag R 35 A

This vehicle had larger back tyres than the 35 B, but otherwise they were alike. Both had 35 hp and a five-speed gearbox. A possible extra was a ten-speed gearbox, with a fast gear. This example from 1953 has a steel plate roof with windscreen, which was also available on request.

Model:	*Hanomag R 35 A*
Production period:	*1953–1957*
hp/kW:	*35/25.6*
Cubic capacity:	*2799*
No. produced:	–

Hanomag R 12

This small tractor built in the wasp waist design to accommodate an idler axle came onto the market in 1953. It had a large ground clearance, which enabled it to perform maintenance and root crop work. The R 12 had a seat with space for two people, but it was really designed to accommodate one person – it was mainly aimed at small farm businesses. It weighed 800 kg, which was comparatively light.

Model:	*Hanomag R 12*
Production period:	*1953–1954*
hp/kW:	*12/8.8*
Cubic capacity:	*511*
No. produced:	–

Hanomag R 324 E

In 1957, Hanomag changed their numbering system and the outwardly redesigned R 27 became the R 324 E, although technically it was not really that much different from its predecessor. It looked quite different, however. Here is a beautifully restored model from 1959, showing the much more rounded bonnet originally introduced in 1954 on the R 12.

Model:	*Hanomag R 324 E*
Production period:	*1957–1959*
hp/kW:	*27/19.8*
Cubic capacity:	*2099*
No. produced:	–

Hanomag R 324 S

This vehicle was introduced in 1959 as part of the upper medium range of tractors and had a double clutch as well as power take-off (PTO) to enable PTO-driven equipment like harvesters to be attached. It weighed 1855 kg and so had a variety of uses, being especially good in the fields. This example comes from 1960 and has, as extras, a windscreen and a steel plate roof.

Model:	*Hanomag R 324 S*
Production period:	*1959–1962*
hp/kW:	*27/19.8*
Cubic capacity:	*2099*
No. produced:	–

Hanomag R 435 B

This tractor was available in a version for use on the land and there was also one with a fast gear. The former had a top speed of 12.3 mph, and the faster version could manage 15.5 mph. Normally, it was fitted with a 'group' transmission system with ten forward and two reverse gears, divided into two groups. The R 435 was the successor to the R 35 but from a technical point of view it was scarcely any different. However, the design of the bonnet in this model looked more 'modern'.

Model:	*Hanomag R 435 B*
Production period:	*1957–1960*
hp/kW:	*35/25.6*
Cubic capacity:	*2799*
No. produced:	–

Hanomag C 224

The differences between the C 224 and its predecessor the R 24 were a new bonnet, an improved steering system and an up-to-date exhaust system. With its frame construction it resembled the R 12 tractor of 1953. It had a two-cylinder, two-stroke, diesel engine with Roots-type compressor flushing system. It could, on request, be fitted with the newly developed Pilot hydraulics system. This vehicle dates from 1962.

Model:	*Hanomag C 224*
Production period:	*1957–1962*
hp/kW:	*24/17.6*
Cubic capacity:	*1021*
No. produced:	–

Hatz

For years Hatz GmbH had been developing and manufacturing engines and after World War II, the company began to build tractors. Hatz had been formed in 1888 and had begun to build engines in 1905, starting with an Otto engine and then moving on to others and gaining a very good reputation on the basis of its excellent quality of work. Building on this experience, Hatz entered the tractor market in 1953 with an entire series of vehicles, ranging from 13 hp to 32 hp. The bestseller was the 10 hp Hatz TL 10.

Hatz TL 12

A one-cylinder, swirl chamber, diesel engine with air-cooling and a Hürth four-speed transmission gave the Hatz TL 12 speeds of up to 11.2 mph. First produced in 1955, its name actually represents its horsepower. At 780 kg, it was particularly light and 1001 were built, making it one of the most successful models of this company from Bavaria. This example comes from 1958.

Model:	*Hatz TL 12*
Production period:	*1955–1961*
hp/kW:	*12/8,8*
Cubic capacity:	*668*
No. produced:	*1001*

Hatz TL 22

The small quantities produced of the different models of tractor show that Hatz was a comparatively modest undertaking. The Hatz TL 22 came out in 1954 but only 235 were sold. It had the block construction design and had a two-cylinder, four-stroke, diesel engine with 22 hp and air-cooling – the radial fan cooled both of the cylinders individually.

Model:	*Hatz TL 22*
Production period:	*1954–1959*
hp/kW:	*22/16.1*
Cubic capacity:	*1992*
No. produced:	*235*

Hatz TL 13

Hatz continued to modernise its tractors. From 1959 they were given a more rounded bonnet, like lots of other tractors of this era. The TL 13 weighed 900 kg and had the same engine as its predecessor, but its transmission was new. Its six-speed gearbox gave a top speed of 12.4 mph.

Model:	*Hatz TL 13*
Production period:	*1959–1963*
hp/kW:	*13/9.5*
Cubic capacity:	*668*
No. produced:	*970*

Hela

This company's original models bore the name 'Hermann Lanz, Aulendorf', but because of possible confusion with the Mannheim firm Heinrich Lanz, also making tractors, the Aulendorf company began to use the abbreviation 'Hela'. The firm had originally been involved in making agricultural machinery and began to produce tractors in 1936. Hela concentrated on lightweight tractors and so was able to benefit from the boom in German agriculture after World War II. When the actual process of mechanisation had come to an end, the company extended its range of tractors to satisfy the needs of a variety of customers. Hermann Lanz, Aulendorf, finally gave up the struggle against its large competitors in 1978.

Hela D 40

This vehicle had a power take-off shaft, mower and belt pulley amongst its accessories, the latter two not fitted as standard but available on request. Like so many tractors in its class, it also had a two-cylinder, Deutz Universal diesel engine, the F 2 M 414. It was reliable and robust – here is one from 1940 with mower and belt pulley – and was built over a period of 11 years, although its production had to be interrupted during the war, between 1942 and 1945.

Model:	*Hela D 40*
Production period:	*1938–1949*
hp/kW:	*22/16.1*
Cubic capacity:	*2198*
No. produced:	*350*

Hela D 14

This tractor was designed for small, rural concerns and had a water-cooled, one-cylinder, 14 hp diesel engine from Motoren-Werke-Mannheim (MWM). It came with a five-speed gearbox, which gave it a top speed of 11.9 mph. It was built for a period of three years (until the D 15 came along), although from 1950, the vehicle was slightly different. This one is from 1952.

Model:	*Hela D 14*
Production period:	*1949–1952*
hp/kW:	*14/10.2*
Cubic capacity:	*1178*
No. produced:	*880*

Hela D 112

This was one of the most successful Hela models of the post-war era and around 3800 were produced in eight years. It was a small farmers' tractor with a choice of a water or air-cooled, one-cylinder, MWM diesel engine with 12 hp. It was quite light, at 990 kg, and had a five-speed gearbox giving it speeds between 2.1 and 12.4 mph.

Model:	*Hela D 112*
Production period:	*1957–1965*
hp/kW:	*12/8.8*
Cubic capacity:	*851*
No. produced:	*3800*

Hela D 415

This was one of the first Hela tractors to be fitted with the newly developed, water-cooled, one-cylinder, AE diesel engine. Normally tractors from small companies like Hela fitted engines made elsewhere but this company had decided to develop its own engine unit, first used in 1956. In the long run, however, this policy did not turn out to be profitable. Customers who preferred an MWM engine were offered the D 415 with this engine. This example with an all-weather roof comes from 1959.

Model:	*Hela D 415*
Production period:	*1956–1959*
hp/kW:	*15/11*
Cubic capacity:	*1082*
No. produced:	*1300*

Hela D 117

This vehicle was available with an air- or water-cooled, two-cylinder, MWM diesel engine or with one of Hela's own make. Its six-speed gearbox had a crawling gear, along with a sprung, pendular front axle. This model from 1960 with side mower shows the changes made to the radiator cowling and bonnet of Hela's tractors.

Model:	*Hela D 117*
Production period:	*1957–1960*
hp/kW:	*18/13.2*
Cubic capacity:	*1400*
No. produced:	*1630*

Hela D 218

Using the D 18 model as a basis, in 1959 Hela developed the D 218. Many of the details were identical to that of its predecessor. It did not have the Hela engine unit but was fitted with either a water- or an air-cooled, two-cylinder, KD 211 Z diesel engine from MWM, which produced 18hp – enough for its target market of small farms. This example from 1961 is one of the models with water-cooling. About 1000 of these tractors were produced.

Model:	*Hela D 218*
Production period:	*1959- 1963*
hp/kW:	*18/13.2*
Cubic capacity:	*1250*
No. produced:	*1000*

Hela D 230

A major feature of the Hela tractors at the end of the 1950s was the large radiator grille. The rounded bonnet design was common at the time and thought to be the ideal shape for a tractor. Even today, the external appearance of the tractor is pleasing. The D 230 was introduced in 1959 and had a two-cylinder, Hela-AZ diesel engine with water-cooling and, with its 30 hp, it was easily able to fulfil the demands of medium-sized businesses. This example from 1964 has a side-on mower.

Model:	*Hela D 230*
Production period:	*1959–1967*
hp/kW:	*30/22*
Cubic capacity:	*2164*
No. produced:	*200*

Hela D 548

From the middle of the 1960s until the beginning of the 1970s, the demand for tractors decreased, since the market was saturated. Small manufacturers like Hela were really affected by this and they only managed to sell 440 of this vehicle from 1967, when it was introduced, until 1975. It was one of the last tractors to be fitted with the company's own engine unit – a water-cooled, three-cylinder, Type AD diesel engine, since the construction of its own engines had become a real luxury for such a small manufacturer. This beautifully restored example left the factory in 1968.

Model:	*Hela D 548*
Production period:	*1967–1975*
hp/kW:	*48/35.1*
Cubic capacity:	*3246*
No. produced:	*440*

Hela D 532

This vehicle came into production in 1969 and 140 were produced. Although it was a robust and reliable tractor, as well as being exceptionally powerful, it was unable to help Hela keep its head above water, since sales of its other tractors were falling as well. The D 532 had a three-cylinder, MWM D 208-3 diesel engine, with water-cooling and direct injection, producing 30 hp. Its gearbox featured a group transmission, comprising eight forward and two reverse gears.

Model:	*Hela D 532*
Production period:	*1969–1976*
hp/kW:	*30/22*
Cubic capacity:	*2233*
No. produced:	*140*

Holder

The Holder Brothers engineering factory was founded in 1888 and was a traditional type of firm. At its works in Metzingen in Germany it first produced other agricultural machines, and then moved on to produce its first single axle tractor in 1930. In the1950s, Holder fixed its sights on providing small tractors for the constantly growing market. Right from the start the management had an eye for the particular needs of the customer and in this way the company has survived until today. They specialise in small tractors for particular tasks.

Holder B 10

This was a small tractor, specifically to be used in wine and fruit-growing areas. The company provided many vehicles for this target group. Even the smallest agricultural concerns could not fail to be attracted by this four-wheel-drive tractor, not least because of its 10 hp engine. This example showing its gently rounded bonnet was built in 1955.

Model:	*Holder B 10*
Production period:	*1953–1957*
hp/kW:	*10/7.3*
Cubic capacity:	*499*
No. produced:	–

Holder B 12

Just like its predecessor, the B 10, this vehicle was for small and specialised agricultural concerns. In comparison to its predecessor, the technology on the B 12 had been improved and there was a 2 hp improvement achieved in performance. Even medium-sized businesses showed interest in the B 12 – here is one from 1957, with mechanised lifting gear for tool attachments – since it proved very useful on the land.

Model:	*Holder B 12*
Production period:	*1957–1969*
hp/kW:	*12/8.8*
Cubic capacity:	*599*
No. produced:	–

Holder A 10

A hydraulic knuckle joint system was one of the characteristics of the small A 10, which was the four-wheel-drive variant of the B 10. It was an exceptionally powerful model and weighed only 635 kg but could actually pull loads to a maximum of 4.5 tonnes. Its knuckle joint steering system made it very versatile and, because of its four-wheel drive, it was very suited for working on uneven, wet or very hilly ground.

Model:	*Holder A 10*
Production period:	*1954–1957*
hp/kW:	*10/7.3*
Cubic capacity:	*499*
No. produced:	–

HSCS

HSCS is the abbreviation for Hofherr-Schrantz-Clayton-Shuttleworth. This traditional manufacturer of agricultural machines, which also built traction engines, brought its first tractor onto the market in 1923. It was driven by petrol. Only a year later they introduced a model driven by crude oil and in the 1930s, the hot bulb engine was used to power a large number of different models. These were aimed, above all, at the medium-sized and larger estates. HSCS Bulldogs were sold all over Europe as well as in Germany, where they were in direct competition with Lanz, who at the time could not satisfy demand.

HSCS Le Robuste R 20/22

'Le Robuste' was the extra name given to this model, since the series as a whole was referred to as the 'Programme'. The hot bulb engined Bulldogs were produced in Budapest, were low in maintenance and reliable, and this was one of the main reasons for their success throughout Europe, even in Germany, where brand names like Lanz were dominant. The R 20/22 – here is one from 1938 – had a three-speed gearbox and produced 25 hp, which was adequate for medium-sized businesses. It was quite similar in design to Lanz tractors

Model:	*HSCS Le Robuste R 20/22*
Production period:	*1932–1944*
hp/kW:	*25/18.3*
Cubic capacity:	*5389*
No. produced:	–

HSCS Le Robuste R 30/35

This 35 hp vehicle was produced from 1933 and was one of the larger models produced by the Hungarian firm. This hot bulb engined Bulldog also had a four-speed gearbox, giving speeds of between 2.3 and 7.6 mph. It was available with iron wheels or pneumatic tyres. The one in the picture dates from 1937 and has pneumatic tyres.

Model:	*HSCS Le Robuste R 30/35*
Production period:	*1933–1944*
hp/kW:	*35/25.6*
Cubic capacity:	*9546*
No. produced:	–

HSCS Le Robuste R 44/48

This model from HSCS was the company's second most powerful during the 1930s. It was also similar in construction to Lanz tractors. It had 48 hp and, because of its size, it was suited to the cultivation of larger, agricultural areas. It came with a belt pulley as standard, so that it could serve as a stationary source of power for other machines. Its main use was out in the fields and with power take-off driven appliances.

Model:	*HSCS Le Robuste R 44/48*
Production period:	*1935–1944*
hp/kW:	*48/35.1*
Cubic capacity:	*10,300*
No. produced:	–

Hürlimann

Tractors from the Swiss company Hürlimann, based near St Gallen, were also of high quality. Its small but well-made 1 K 8 came out in 1929 and filled a small gap in the market. It gave farmers an 8 hp vehicle capable of any task, including not only use in the fields and for transport, but also as a stationary engine; it had a belt pulley attached to the mower unit. After World War II, Hürlimann built its new diesel tractors almost exclusively from parts produced in their own factories. When, in 1958, Switzerland relaxed its rules on the importing of foreign tractors, there was a great deal of competition for Hürlimann. It countered this with quality and reliability. However, it was only by working with Lamborghini and SAME, at the end of the 1970s, which ensured the existence of the company.

Hürlimann 1 K 8

This vehicle was built from 1929 and had a French, one-cylinder, Bernard 3 Otto engine, with water-cooling. It had only 8 hp and 1200 rpm, so it was an appropriate tractor for the smallest of farms. It was powerful and not only suitable for work in the fields, as it also came with a belt pulley and could be used to power stationary vehicles. The Maag four-speed gearbox had three forward gears and one reverse gear. The 1 K 8 was the first ever Hürlimann model and was the basis for the good reputation of the Swiss tractor manufacturer.

Model:	*Hürlimann 1 K 8*
Production period:	*1929–1930*
hp/kW:	*8/5.9*
Cubic capacity:	*763*
No. produced:	*102*

Hürlimann D 400

The D 400 was designed solely for use in industry. It had a four-cylinder, Type D diesel engine with 45 hp and it was a tremendously powerful vehicle for its time, able to move heavy loads without any problem at all. It had a five-speed transmission giving it a top speed of 21.7 mph, making it excellent for use on the roads. It weighed 2800 kg and was available either with a canopy or an enclosed driver's cab.

Model:	*Hürlimann D 400*
Production period:	*1939–1950*
hp/kW:	*45/32.9*
Cubic capacity:	*4019*
No. produced:	–

Hürlimann D 50

Hürlimann tractors gained their good reputation because, from 1946, they used almost exclusively parts that they had produced themselves to build their tractors, although they occasionally had special parts made, which were contracted out. The D 400 was one of these 'quality tractors'. It had a two-cylinder, diesel engine with 28 hp and a six-speed transmission with five forward and one reverse gear. This example from 1948 was fitted with a side mower.

Model:	*Hürlimann D 50*
Production period:	*1948–1952*
hp/kW:	*28/20.5*
Cubic capacity:	*2520*
No. produced:	–

Hürlimann H 12

This vehicle had a four-cylinder Otto engine and could be powered with either petrol or paraffin. It did not belong to the new series of tractors, which all had diesel engines. Still, it did have the five-speed gearbox and was robust and reliable, offering 32 hp, which was quite sufficient for work on the land in medium-sized businesses.

Model:	*Hürlimann H 12*
Production period:	*1949–1955*
hp/kW:	*32/23.4*
Cubic capacity:	*2400*
No. produced:	–

Hürlimann D 200

This was a vehicle for large concerns, introduced in 1946. It had a four-cylinder Hürlimann diesel engine with water-cooling and was considered to be particularly economical in use. It had a cranked front axle, a five-speed transmission, a power take-off shaft – all standard for the D series of tractors, and on request could be fitted with a three-point hydraulics system. This example comes from 1947.

Model:	*Hürlimann D 200*
Production period:	*1946–1956*
hp/kW:	*45/32.9*
Cubic capacity:	*4019*
No. produced:	*575*

Hürlimann D 90

Hürlimann brought this vehicle onto the market in 1958, one of three models in a new series with differing horsepower ratings. Hürlimann had introduced the DS 70 engine unit in 1957 and the four-cylinder diesel engine with water-cooling was used in the D 90, producing 45 hp. It was also well equipped with a double clutch, power take-off shaft and a ten-speed gearbox. This beautifully restored model comes from 1963 and has a windscreen as well as a roof.

Model:	*Hürlimann D 90*
Production period:	*1958–1966*
hp/kW:	*45/32.9*
Cubic capacity:	*2646*
No. produced:	–

Hürlimann D 130 A

This was a vehicle with four-wheel drive, introduced in 1960. Hürlimann had been producing four-wheel-drive vehicles since 1965, but without any great success, even though they were reliable, robust tractors, whose quality was not to be dismissed out of hand. This vehicle – here is one from 1969 – had a synchronised transmission with 12 forward and 6 reverse gears, which was very useful when negotiating uneven and wet ground. Its four-cylinder diesel engine gave it 77 hp.

Model:	*Hürlimann D 130 A*
Production period:	*1969–1972*
hp/kW:	*77/56.4*
Cubic capacity:	*4433*
No. produced:	–

Hummel

The Hummel agricultural machine factory was founded in 1907. In contrast to most of the other businesses in this sector, Hummel focused on producing threshing machines until after World War II, and only moved into the tractor market in 1952 with its small one-axled tractors. When the market for these small tractors began to get squeezed in the 1960s, Hummel could no longer keep up with its larger competitors and production came to an end in 1966.

Hummel DT 54

Hummel's factories concentrated mainly on tractors for small farms. Their first four-wheel tractor was the DT 54, in production from 1954 onwards. It was a small, narrow gauge tractor with a one-cylinder, two-stroke, Fichtel & Sachs diesel engine with water-cooling, which originally had 9 hp, later increased to 10 hp. The transmission was the company's own and had six forward and two reverse gears, giving it speeds between 1.4 and 9.6 mph. Its track width – here is an 10 hp vehicle with double tyres at the back – could be adjusted in several ways.

Model:	*Hummel DT 54*
Production period:	*1954–1957*
hp/kW:	*10/7.3*
Cubic capacity:	*499*
No. produced:	–

Hummel DT 54

Hummel tractors were found everywhere but a large number of their parts were not built by the company. They did produce some tractor parts, however, including many engine units. This DT 54 is one of the first tractors of its type to be built. It is still fitted with a 9 hp engine. It weighed 900 kg, was built in the block construction method and has a four-point hitch apparatus for mounting tools.

Model:	*Hummel DT 54*
Production period:	*1954–1957*
hp/kW:	*9/6.6*
Cubic capacity:	*356*
No. produced:	–

Hummel T 20

Bearing in mind that it was a small company, which still produced many parts by hand, the Hummel company could offer a considerable range of goods. In 1958, the customer had a choice between five one-axle tractors and three two-axle tractors. The T 20 came onto the market in 1959. It had a two-cylinder, MWM diesel engine with air-cooling and 20 hp. The transmission had 12 forward and 4 reverse gears and was developed by the company itself. This example was built in 1962. This was just four years before Hummel gave up the production of tractors due to fierce competition.

Model:	*Hummel T 20*
Production period:	*1959–1965*
hp/kW:	*20/14.6*
Cubic capacity:	*1005*
No. produced:	–

IFA

Industrieverband Fahrzeugbau (DDR-Traktoren)

After World War II, tractor producers in the Soviet zone of occupation in Germany experienced some changes. The owners were expropriated and all companies that had produced vehicles and engines were put under the control of the IFA, founded in 1948. These companies were now effectively nationalised and they included the tractor works in Brandenburg, Schönebeck and Nordhausen. The new tractors from East Germany were by no means of poor quality. The biggest problem was that not enough of them were produced, partly because of the lack of raw materials with which to build them. Amongst the best known were the RS 01/40 Pionier, the RS 02/22 – much better known by the impressive name of the 'Brockenhexe', the models of the Famulus series, like the RS 04/30, and the Type Harz tractors. For the cultivation of large areas of farmland in the newly created agricultural production collectives (LPG), tractors with good performance were vital, not least because the LPGs worked on a shift system and this demanded that the machines were kept functioning all day. Only after it had been ascertained that the RS 01/40 Pionier, the only better-performance tractor that they had, was not up to the task, did they develop and construct new models. The RS 14/30 Fanulus came onto the market in 1956 with 30 hp and was later available with 33 hp. Using the two-cylinder, swirl chamber, Famulus 30 diesel engine, the Famulus 36 was finally developed. This was done simply by drilling out the cylinders and thereby increasing the rpm.

RS 03/30 Aktivist

This was the third 30 hp tractor to be produced in the German Democratic Republic (the GDR – East Germany) and it had a water-cooled, two-cylinder, four-stroke, V-form, diesel engine. The firm of Orenstein & Koppel in Babelsberg had been renamed the Karl Marx Works, and it was here that the engine was designed. The drawback of this tractor – this example is one of the first to be produced – was that its wheelbase was too short and the distribution of weight was insufficient, which meant that the vehicle could not use the full power of the engine. For this reason, its uses were limited.

Model:	*RS 03/30 Aktivist*
Production period:	*1949–1951*
hp/kW:	*30/22*
Cubic capacity:	*3325*
No. produced:	*3761*

RS 03/30 Aktivist

A second series of this tractor was produced from 1951 but it clearly had the same problem as its predecessor: its wheelbase was very short and the front axle was right up at the front. This led to a poor distribution of weight, so that on the one hand, it was difficult to steer and on the other, the tractor could rear up when it had to pull loads. Presumably, this was one of the reasons why its production was stopped after only two years. Standard equipment was a belt pulley and a power take-off shaft.

Model:	*RS 03/30 Aktivist*
Production period:	*1951–1952*
hp/kW:	*30/22*
Cubic capacity:	*3325*
No. produced:	*3761*

RS 02/22 Brockenhexe

The Normag engine of this vehicle had 22 hp, which was just enough for the cultivation of the small and medium-sized land areas but it was not designed to cope with the larger areas of land found on the LPGs. Nevertheless, it had to be used on the LPGs in the first years of the existence of the GDR, for the simple reason that they did not have another tractor available with better performance. This example with a mower is from 1951. The basic models weighed 1775 kg and if necessary could be fitted with power take-off shaft and belt pulley.

Model:	*RS 02/22 Brockenhexe*
Production period:	*1949–1952*
hp/kW:	*22/16.1*
Cubic capacity:	*2198*
No. produced:	*1950*

RS 01/40 Pionier

The Pionier was, as its name subtly suggests, the first tractor fully built and developed in the GDR. But the basic construction was adopted from the 40 hp FAMOR tractor that had been in operation before the GDR was formed. The Pionier also had 40 hp and was exceptionally powerful for work on the land and it was used for years in the LPGs even though its four-cylinder, four-stroke, diesel engine, just like that of the Brockenhexe, was not specifically designed for this purpose. This example was built in 1951 and has an enclosed driver's cab.

Model:	*RS 01/40 Pionier*
Production period:	*1950–1956*
hp/kW:	*40/29.3*
Cubic capacity:	*5022*
No. produced:	*20,123*

RS 04/30

Like other GDR tractors of this era, this vehicle also had 30 hp and was used on large areas of the LPGs, although in the longer term this meant it was overworked. This photo shows one from 1954 with a mower bar. With its large ground clearance of 470 mm, it was excellent for maintenance work, especially when its transmission was fitted with a crawling gear. This reduced the minimum speed of this 2600 kg vehicle to less than 0.6 mph. With the traditional five-speed gearbox it managed speeds of between 2.2 and 11.1 mph.

Model:	*RS 04/30*
Production period:	*1953–1956*
hp/kW:	*30/22*
Cubic capacity:	*3012*
No. produced:	*7574*

RS 08/15 Maulwurf

Even if the figures 08/15 seem a little amusing to us today, and its design seems unusual because of the inclusion of an equipment carrier from 1949, this was a very versatile tractor and suited to a lot of tasks. Its main drawback – as was the case with all the GDR tractors at the time – was its two-cylinder, two-stroke, Otto engine with water-cooling, which had originally been a car engine. It only had 15 hp. Nevertheless, 5700 were actually built.

Model:	*RS 08/15 Maulwurf*
Production period:	*1952–1956*
hp/kW:	*15/11*
Cubic capacity:	*690*
No. produced:	*5751*

RS 01/40 II Harz

This vehicle was only on the market for a short time. It was the successor to the Pionier, which was by then somewhat outdated, and was later superseded by the Famulus. The Harz – here is one from 1957 – differed from the Pionier with its more rounded bonnet and its engine with an extra 2 hp. Also, the wheels on the front axle of the Harz were each sprung individually and this gave it more ground clearance. It was therefore much more versatile than the Pionier. It could be fitted with a hydraulic power lift if required and the gear ratio of the four-speed transmission could be changed.

Model:	*RS 01/40 II Harz*
Production period:	*1957–1958*
hp/kW:	*42/30.7*
Cubic capacity:	*5022*
No. produced:	*2175*

RS 14/36 Famulus 36

As its name suggests, the Famulus 36 was a 36 hp tractor. It first came onto the market in 1960 and more than 15,000 were produced. The manufacturer offered a choice of engines between water and air-cooled, and the group transmission had five forward and two reverse gears per group. This tractor – the one in the picture is from 1963 – was not only used in the GDR but was also sold abroad. Its export success depended on its range of features, and this robust tractor had, in line with the international standard for such vehicles, a three-point power lift.

Model:	*RS 14/36 Famulus 36*
Production period:	*1960–1964*
hp/kW:	*36/26.4*
Cubic capacity:	*3280*
No. produced:	*15,672*

ZT 300 D Fortschritt

In 1967, the GDR finally produced a model that the LPGs had long been waiting for – a tractor with a more powerful engine, making it suited to the cultivation of large areas. The four-cylinder, four-stroke, direct injection, ZT 300 diesel engine had a MAN mid-engine combustion system, built under licence, and produced 90 hp. In 1978, this was increased to 100 hp. The ZT abbreviation of this model, which weighed 4950 kg and was built using the half-frame construction method, stood for 'Zugtraktor' (towing vehicle) and here is one from 1970. Its three-group transmission included nine forward gears and could manage speeds up to 18.6 mph.

Model:	*ZT 300 D Fortschritt*
Production period:	*1967–1983*
hp/kW:	*90–100/65.9–73.2*
Cubic capacity:	*6560*
No. produced:	*72,382*

International Harvester

As early as 1902, the American tractor producers Deering and McCormick had joined forces with the International Harvester Company in Chicago. Their commercial success began in 1917 with the Model 8-16, which continued to promote the mechanisation of agriculture until the 1930s. International broadened its range with the Farmall F 12 and also produced a tractor for small farms. In order to satisfy all the demands of its customers, the company developed further models after World War II using an economical diesel engine, and also produced tractors designed for European needs in Europe itself, with vehicles like the Minitrecker Farmall Club, which was very popular in France. International Harvester also made its mark in Germany and at the start of the 1960s, counting the number of new registrations, it came just behind Deutz in tractor sales. Ten years later, it had reached first place. The merger of Case with International Harvester in 1984 led to a rationalisation of products, because there was inevitable duplication, and so the number of models being produced was cut.

International 8-16

This vehicle, first introduced in 1917, evokes great feelings of nostalgia when we look at it today, although it was actually one of the most modern tractors of its time. It had a water-cooled, four-cylinder, Otto engine and a gearbox with two forward and one reverse gear, giving a top speed of 4.1 mph. Weighing 1647 kg, it was also fitted with a belt pulley.

Model:	*International 8-16*
Production period:	*1917–1922*
hp/kW:	*18.5/13.5*
Cubic capacity:	*4430*
No. produced:	–

International 10-20 Titan

Although named 'Titan', this model from 1915 was actually the smallest of the tractors in this particular series. It was, however, the most popular and 78,000 were actually sold. Powered by a petrol engine, it was sold by McCormick under the name of 'Mogul'. The reason for this second name for the tractor was because, although McCormick and Deering were trading under the name of International Harvester Company, there were actually two different sales organisations. The model in the picture was manufactured in 1919. Its back wheels have metal ridges for grip that protrude on either side of the machine.

Model:	*International 10-20 Titan*
Production period:	*1915–1924*
hp/kW:	*20/14.6*
Cubic capacity:	*7644*
No. produced:	*more than 78,000*

International 8-16 Mogul

This vehicle came onto the scene in 1916 and managed speeds of 2 and 2.7 mph, thanks to its two-speed gearbox. Its two-cylinder Otto engine was huge and provided 16 hp. There was a belt pulley on the side, which meant that the Mogul could help to drive stationary vehicles. Naturally, it had iron wheels with no tyres.

Model:	*International 8-16 Mogul*
Production period:	*1916*
hp/kW:	*16/11.7*
Cubic capacity:	*7644*
No. produced:	*in 1918 more than 17,000*

International 10-20 Titan

Metal ridges on the back wheels ensured that this vehicle could travel on the road despite having no tyres. Its engine was cooled by means of a 180-litre water tank above the front axle, which almost blocked driver's view. Its two-cylinder engine, which gave it a top performance of 575 rpm, could be powered either by paraffin or petrol. This impressively powerful machine was chain driven.

Model:	*International 10-20 Titan*
Production period:	*1915–1924*
hp/kW:	*20/14.6*
Cubic capacity:	*7644*
No. produced:	*more than 78,000*

McCormick-Deering 10-20

This vehicle came onto the market in 1923 in a variety of designs, for both work in the fields and travelling on the road. This example from 1925 has ridged cylindrical back wheels, making it suitable for driving on the road without damaging the road surface. Iron bands were put on the front wheels. The belt pulley was attached to the side, thus allowing stationary machines to be driven.

Model:	*McCormick-Deering 10-20, All-purpose tractor*
Production period:	*1923–1942*
hp/kW:	*20/14.6*
Cubic capacity:	*4431*
No. produced:	*216,000*

McCormick-Deering 10-20

This vehicle and the equivalent Fordson of the time were very similar with regard to size and accessories. In contrast to the Fordson model, however, this tractor – here is one with lugs on the back wheels – had a magnetic ignition system, an advanced clutch system and a power take-off shaft. The four-cylinder, Otto engine had a top performance of 1150 rpm.

Model:	*McCormick-Deering 10-20, Tractor*
Production period:	*1923–1942*
hp/kW:	*20/14.6*
Cubic capacity:	*4431*
No. produced:	*216,000*

Farmall Regular

This tractor was also suitable for a number of uses. It was suitable for the cultivation and maintenance of arable crops as well as for ploughing. It had four wheels but they were arranged so it appeared to have three, the small front wheels being right next to each other. The wheels had iron spokes and bands around them.

Model:	*Farmall Regular Tractor*
Production period:	*1924–1932*
hp/kW:	*24/17.6*
Cubic capacity:	*3432*
No. produced:	*around 45,000*

McCormick-Deering 10-20

The big thing in the 1930s was air tyres. Most tractors changed over to having air tyres from plain iron wheels since a tractor with such tyres could be used without any problem in the fields as well as on the streets. Rubber tyres spared the road surface and also allowed higher speeds. This tractor from 1932 probably originally had only iron wheels but was fitted with tyres later on.

Model:	*McCormick-Deering 10-20, Tractor*
Production period:	*1923–1942*
hp/kW:	*20/14.6*
Cubic capacity:	*4431*
No. produced:	*216,000*

International Farmall F 12

The vehicle was in development for a relatively long time – seven years, in fact. When it was released onto the market in 1933, it had a water-cooled, four-cylinder, 15 hp Otto engine. It was a particularly successful model, selling very well in the six years of its production. The first models had iron wheels, a three-speed gearbox and a top speed of 3.7 mph. This broad gauge model from 1936 has lugs on the wheels at the back.

Model:	*International Farmall F 12*
Production period:	*1933–1939*
hp/kW:	*15/11*
Cubic capacity:	*1400*
No. produced:	–

International Farmall F 14

This vehicle was a development of the F 12, which latterly had been fitted with air tyres. The engine of this vehicle had 17 hp and a four-speed gearbox, which gave speeds of between 2.4 and 10.3 mph when it was fitted with rubber tyres. The F 14 was not, however, built over a long period. In 1939, just one year after its introduction, the Farmall Model A was introduced. This lovely broad gauge example with air tyres comes from 1938.

Model:	*International Farmall F 14*
Production period:	*1938–1939*
hp/kW:	*17/12.4*
Cubic capacity:	*1851*
No. produced:	–

Deering F 12 FG

This vehicle with its simple, straightforward design was produced in Germany from 1937. Unusually for the time, it was sold in Germany with an Otto engine. The sales organisations of both McCormick and Deering marketed the machine; there was no difference between the two apart from the different names on the side of the water tank for the radiator. This example comes from the last year of production.

Model:	*Deering F 12 FG*
Production period:	*1937–1940*
hp/kW:	*20/14.6*
Cubic capacity:	*2043*
No. produced:	*4022*

McCormick-Deering WD 40

This was McCormick-Deering's first tractor with a diesel engine – a four-cylinder unit with water cooling, built in large quantities in America. This beautifully restored one from 1937 had, like the other models in this series, a four-speed transmission, which with air tyres had a top speed of 11.9 mph. It weighed 3398 kg and was the most powerful International Harvester model of that time.

Model:	*McCormick-Deering WD 40*
Production period:	*1934–1940*
hp/kW:	*53/38.8*
Cubic capacity:	*5538*
No. produced:	–

Farmall Cub

This vehicle was introduced after World War II and was a real 'mini-tractor'. The smallest model produced by International Harvester, it was used, naturally enough, by small farms, although medium-sized concerns liked to use it for maintenance purposes. The track width was adjustable between 102 and 147 cm, which made it perfect for this type of work. Its water-cooled, four-cylinder, Otto engine had 9 hp and its three-speed gearbox allowed a top speed of 6.2 mph. This beautifully restored exemplar comes from 1950.

Model:	*Farmall Cub*
Production period:	*1947–1958*
hp/kW:	*9/6.6*
Cubic capacity:	*960*
No. produced:	–

McCormick BWD 6

The BWD 6 was produced at the IH works in Doncaster, England and was very similar to the WD 6 built in the USA. It came with either a diesel engine or an Otto engine, although it was the diesel unit that dominated the European market with its four cylinders and water-cooling. Its speeds varied between 2.3 and 14.4 mph, made possible by a five-speed gearbox. This vehicle left the factory in 1955.

Model:	*McCormick BWD 6*
Production period:	*1947–1955*
hp/kW:	*36/26.4*
Cubic capacity:	*3869*
No. produced:	–

Farmall Super BMD

This vehicle appeared in 1952 and was the successor to the Farmall BM. It had the same five-speed gearbox as its predecessor, giving it the same top speed of 16.1 mph. The Super BMD had, however, been given a new engine: a four-cylinder diesel unit with water-cooling and 45 hp, as opposed to the BM's 38 hp. This new engine, which had been built in Doncaster, was also more economical to use. Here is a Super BMD from 1953.

Model:	*Farmall Super BMD*
Production period:	*1952–1956*
hp/kW:	*45/32.9*
Cubic capacity:	*4327*
No. produced:	–

Farmall M

Like the Model H, the Farmall M lasted for many years in the International Harvester range of tractors. It was a medium-class tractor with a water-cooled, four-cylinder, Otto engine and four-speed transmission. From 1941 it was available with a diesel engine but under the name of MD. There were two varieties of the Farmall M. The one we see here is the standard version, whose track width was adjustable, and the root-crop version, which had double front tyres.

Model:	*Farmall M*
Production period:	*1939–1952*
hp/kW:	*35/25.6*
Cubic capacity:	*4015*
No. produced:	–

Farmall Super A

'Small but nice' – this was the slogan used by the manufacturers when they developed the Farmall Model A. Its water-cooled, four-cylinder, Otto engine only managed 18 hp but for its target market of small farms in the USA, this performance was quite enough and its sales price of 575 US dollars made it a very reasonable purchase. This small tractor was available from International Harvester from 1939. It was modified in 1949, being fitted with a hydraulics system and known from then on as the Super A. It had a four-speed gearbox, giving it speeds between 2.3 and 9.6 mph. The Farmall A, or the Super A, was the smallest tractor ever available from International Harvester.

Model:	*Farmall Super A*
Production period:	*1947–1954*
hp/kW:	*18/13.2*
Cubic capacity:	*1763*
No. produced:	–

IHC Neuss

As early as 1908, the American International Harvester Company established a base in Germany at in Neuss am Rhein. At first it was just for agricultural machines but from 1946 tractors were built there as well. They carried the brand name Farmall-Diesel. After World War II, IHC also fitted water-cooled, diesel engines and within a few years, by 1960, they had reached second place behind Deutz in the official statistics. By 1972, most sectors of agriculture had IHC tractors and the situation remained like this for several years. However, when they were taken over by Case, a 'global' business model was introduced and the works in Neuss were closed.

McCormick-Deering FG

The FG was actually originally produced in 1940 but because of the war, by 1947 production had virtually ceased in Neuss. In 1950, the designers at International Harvester modernised the vehicle, giving it a protective grille for the radiator and a bonnet more suited to the prevailing styles of that era. Another innovation was an electric starter motor. In addition, the German models were now painted red like the IH tractors produced in other countries. So it was now clear to see that although made in different countries, these tractors were produced by the same company. The Otto engine with water-cooling was however still fitted to the German-made models.

Model:	*McCormick-Deering FG*
Production period:	*1940–1951*
hp/kW:	*20/14.6*
Cubic capacity:	*2043*
No. produced:	*1543*

Farmall-Diesel DLD 2

A new era for Germany's IH branch began at the start of the 1950s. The company's management had given it specific permission to construct its own tractors. So, in 1953, it brought onto the market the 14 hp DLD 2 farmer's tractor, built in the block design. It was the smallest of all the tractors developed in Germany at this time. Indeed, it only weighed 1305 kg, but it could move loads of up to 10 tonnes, which was a magnificent performance for such a small tractor.

Model:	*Farmall-Diesel DLD 2*
Production period:	*1953–1956*
hp/kW:	*14/10.2*
Cubic capacity:	*1103*
No. produced:	*5480*

Farmall-Diesel DGD 4

This was also one of the models developed in Neuss. Its engine unit had 30 hp – quite sufficient for the demands of medium-sized farms, and even some large concerns used it as their main tractor as well. This is not surprising, since it could pull loads of up to 20 tonnes without any problem. For the first few years it had a five-speed gearbox and later on it was provided with one with six gears.

Model:	*Farmall-Diesel DGD 4*
Production period:	*1953–1956*
hp/kW:	*30/22*
Cubic capacity:	*2175*
No. produced:	*8130*

Farmall-Diesel DED 3

The DED 3 was introduced in 1953 and was a modified version of the DED, although the designers had actually only made minor technical and cosmetic changes. This model and the DGD 4 were the most successful models of that particular series from International Harvester. A total of 8652 of the DED and the DED 3, counted together, were sold. Like the DGD 4, the DED 3 had, at first, a five and then later six-speed gearbox. It was very often the only tractor used by medium-sized farm businesses.

Model:	*Farmall-Diesel DED 3*
Production period:	*1953–1956*
hp/kW:	*20/14.6*
Cubic capacity:	*1631*
No. produced:	*8652 (together with the DED)*

Farmall-Diesel DGD 4

One of the main features of the DGD 4 was the four-cylinder, block design engine typical of the International Harvester tractors of that time. It had a comparatively low weight of 1370 kg and, because of its immense pulling power, as well as its ability to be used almost anywhere, it became a real sales hit. This example from 1954 is fitted with an all-weather roof as an extra accessory.

Model:	*Farmall-Diesel DGD 4*
Production period:	*1953–1956*
hp/kW:	*30/22*
Cubic capacity:	*2175*
No. produced:	*8130*

Farmall D 320

This model came onto the market in 1956 and was a compact and robust tractor with 20 hp, popular with medium-sized businesses. IH tractors from this size upwards could be provided with an 'agriomatic' transmission if required. With this, the driver could change gear by means of a hand lever rather than stepping on the clutch, and he did not need to be sitting in the driver's seat. It also required no adjustment to the rpm of the power take-off shaft nor the speed of the tractor.

Model:	*Farmall D 320*
Production period:	*1956–1962*
hp/kW:	*20/14.6*
Cubic capacity:	*1631*
No. produced:	*13,298*

Farmall D 324

This medium-size tractor produced 24 hp, making it rather more powerful than the D 320 from the same series. This was due to its three-cylinder, swirl chamber, diesel engine with water-cooling. Its six-speed transmission could manage speeds between 0.9 and 11.7 mph. It weighed 1348 kg and was a great sales hit, with 24,000 units being sold.

Model:	*Farmall D 324*
Production period:	*1956–1962*
hp/kW:	*24/17.6*
Cubic capacity:	*1825*
No. produced:	*24,490*

Farmall D 214

The IH factory in Neuss celebrated its 50th anniversary in 1958. To celebrate this anniversary, the firm added further tractors to the existing range, like the D 214, which was the successor to the D 212. It had a six-speed gearbox, which included a crawling gear. It weighed only 1053 kg and was only 14 hp but it was actually a very powerful vehicle.

Model:	*Farmall D 214*
Production period:	*1958–1962*
hp/kW:	*14/10.2*
Cubic capacity:	*1103*
No. produced:	*8046*

McCormick D 215

The new series of designs produced in 1958 by the International Harvester Company in Neuss comprised 10 tractors. The D 215 was the smallest of these, with a two-cylinder, water-cooled diesel engine producing 15 hp. It had adjustable track width and a six-speed gearbox with a crawling gear. This example from 1964 has a side mower. During this same year, following poor sales, the production of small tractors was stopped.

Model:	*McCormick D 215*
Production period:	*1962–1964*
hp/kW:	*15/11*
Cubic capacity:	*1088*
No. produced:	*2318*

McCormick D 432

This vehicle weighed 1494 kg and could accurately be described at this weight, and with the performance it provided, as a medium to heavy tractor. It had an eight-speed gearbox with a crawling gear and an agriomatic system, which enabled an easy transition from use on the road to use in the fields by means of a hand lever. It also had an adjustable track width. This one from 1964 has a Fritzmeier all-weather roof together with side covers, giving protection against spray and mud.

Model:	*McCormick D 432*
Production period:	*1962–1965*
hp/kW:	*32/23.4*
Cubic capacity:	*2175*
No. produced:	*10,712*

McCormick D 514

This vehicle was not developed independently in Neuss but came originally from the USA. The company felt it necessary to sell it in Germany so that they could compete against other manufacturers producing a similar model of tractor. However, the International 504, as it was called in America, had to undergo certain changes in order to meet requirements in Germany. The four-cylinder diesel engine of the D 514 had 53 hp and was delivered as standard with a five-speed transmission.

Model:	*McCormick D 514*
Production period:	*1963–1965*
hp/kW:	*53/38.8*
Cubic capacity:	*3080*
No. produced:	*1199*

IH 423

The IH works in Neuss introduced a new series of tractors in 1965, and this model, the H 423, released in 1966, belongs to that series. Compared to its predecessors, the new models seemed to be bulkier, mainly because the shape of the bonnet was more angular. They had the most modern generation of engines. The IH 423 had, for example, a three-cylinder, direct injection, water-cooled diesel engine with 42 hp. Standard equipment included an agriomatic transmission system. It was so successful that over a period of nine years, almost 28,000 were sold.

Model:	*IH 423*
Production period:	*1966–1975*
hp/kW:	*42/30.7*
Cubic capacity:	*2356*
No. produced:	*27,803*

IH 353

This vehicle, built in 1970, has a safety frame and belongs to the series developed by the Neuss factory in the 1960s. This medium-size tractor was built with the block design method and the comfort of the driver was top priority: amongst other things, the controls were laid out so as to be very easy to reach. More than 19,000 were sold. They were low-maintenance vehicles: for example, the oil needed changing only after every 200 hours of work.

Model:	*IH 353*
Production period:	*1967–1972*
hp/kW:	*36/26.4*
Cubic capacity:	*2356*
No. produced:	*19,167*

IH 624

This was one of the first two models of this series produced in Neuss from 1965. It had a four-cylinder, direct injection, diesel engine and had a top performance of 2100 rpm. There was a choice of transmissions, between the IH eight-gear synchronised gearbox and the IH agriomatic S reverse gear system. Both gave a maximum speed of 18 mph, which made it excellent for use on the roads. An all-weather roof came as an extra accessory, like the one on this example from 1969.

Model:	*IH 624*
Production period:	*1965–1972*
hp/kW:	*61/44.7*
Cubic capacity:	*3375*
No. produced:	*24,960*

JCB

JCB's heavy tractors are built in Staffordshire. All the Fastrac models are distinguishable by their Cummins turbo diesel engines with six cylinders and four valves, as well as electronic controls and intercooling. Further characteristics include 54 forward and 18 reverse gears and the framework building design.

JCB 3220

This vehicle has 220 hp and a six-cylinder turbo diesel engine and is the most powerful member of the whole Fastrac range. Like all the other vehicles in this range, the JCB 3220 has a Cummins engine. The name Fastrac is well deserved. With its 24 forward and 18 reverse gears, these tractors can, depending on the model, reach speeds between 40 and 50 mph.

Model:	*JCB 3220*
hp/kW:	*220/164*
Cubic capacity:	*5883*

JCB 2140

This is one of the Trac four-wheel drive vehicles, which can reach a top speed of 31 mph. It has a Cummins QSB 30 turbo diesel engine producing 155 hp. This vehicle comes with a rear chassis level adjuster, Selectronic and Smoothshift transmission and automatic three-phase load circuit. It weighs 6600 kg and has a power take-off shaft with two speed ranges.

Model:	*JCB 2140*
hp/kW:	*155/116*
Cubic capacity:	*5883*

JCB 3190

When building this vehicle, the JCB designers put the emphasis on comfort and making sure the vehicle was environmentally friendly. For example, the driver's cab is sprung and very well insulated, so the level of noise in the interior is very low. Similarly, the Cummins engines in this series are very low in emissions and have a high torque. A variety of extra accessories comes under the name Plus-Paket.

Model:	*JCB 3190*
hp/kW:	*193/144*
Cubic capacity:	*5883*

John Deere

Although the roots of this company can be traced as far back as 1837, this US producer of agricultural machines only turned to the production of tractors rather late in the day. The 10-20 GP, GP standing for 'General Purpose', was first built in 1928 and it was one of the first tractors with a hydraulic lifting device. The world economic crisis would have made tractor production almost a brief interlude for Deere & Company, had the manufacturer not seen the bigger picture; despite slack sales, they built the John Deere A, which became very popular with farmers. So, these tractors produced in Moline became a sales hit and, after World War II, they continued with the pre-war range and added something new with the Model M. The company expanded in 1956 into Germany and joined forces with the ailing Lanz company. From this springboard of the European market, Deere aimed to conquer the markets in Africa and the Middle East. But first of all, of course, they needed to win over the customers in Germany. Under the name of John Deere-Lanz, this process took quite a while, since the farmers were still very much attached to their Lanz-Bulldogs, even though Deere's tractors were a lot more modern.

John Deere 10-20 GP

The ground clearance of the John Deere GP is almost legendary. The tractor was of course designed to provide farmers with a machine that could be used both for cultivation and for maintenance work. It came in a standard edition – here is the 10-20 GP with iron wheels, but there was also a broad gauge version available as a row-crop tractor. The latter had the name GPWT. The adjustable track width ensured that it could work on three rows at once.

Model:	*John Deere 10-20 GP*
Production period:	*1928–1935*
hp/kW:	*20/14.6*
Cubic capacity:	*4852*
No. produced:	–

John Deere A

This was first introduced in 1934 as a broad gauge tractor. Originally released with 18 hp, this was gradually raised to 24 hp. From 1938 it was available with an engine casing covering the steering box and the radiator and thus improving the visual appearance of this medium-size tractor. It also ensured that the driver had a better field of vision. This example comes from 1940.

Model:	*John Deere A*
Production period:	*1934–1952*
hp/kW:	*24/17.6*
Cubic capacity:	*3214*
No. produced:	*328,000*

John Deere B

This vehicle came onto the market in 1934 and was a smaller version of the John Deere A. It had the company's own two-cylinder, water-cooled engine, which had also been in the Type A, but producing just 14hp and yet a higher rpm. This small tractor was exceptionally successful in the USA since there were numerous small businesses here for which the John Deere B was completely satisfactory. This beautifully restored broad-gauge example from 1935 is fitted with spade wheels.

Model:	*John Deere B*
Production period:	*1934–1947*
hp/kW:	*14/10.2*
Cubic capacity:	*2324*
No. produced:	–

John Deere A

The A and B versions of John Deere tractors came in many varieties. For example, the customer could choose between a variety of sizes of back wheels and ground clearances and this obviously was a factor in the great success of these tractors. Total production of the Type A alone – here is one from 1942 with rubber tyres – reached 328,000. One of John Deere's innovations was the inclusion for the first time of a built-in hydraulic power lift. The belt pulley and the power take-off shaft were actually to be found in the centre of this vehicle.

Model:	*John Deere A*
Production period:	*1934–1952*
hp/kW:	*24/17.6*
Cubic capacity:	*3214*
No. produced:	*328,000*

John Deere BW

This vehicle came onto the market in 1935 and had a top speed of 5 mph. The 'W' in the name stood for 'wide' and indicated that it was a broad gauge tractor. This small tractor – here is one from 1939 – had iron wheels and at first glance looks rather frail but it was not. It could be powered with petrol or paraffin and the track on its front axle was adjustable.

Model:	*John Deere BW*
Production period:	*1935–1947*
hp/kW:	*14/10.2*
Cubic capacity:	*2324*
No. produced:	–

John Deere D

First introduced in 1923, this vehicle was continually updated and remained in production until the 1950s. For example, at the end of the 1930s, it was fitted with a modern engine casing. Its two-cylinder, four valve, Otto engine with water-cooling, built by the firm itself, had 40 hp and an engine speed of 900 rpm. It had a three-speed transmission and a top speed of 5.3 mph.

Model:	*John Deere D*
Production period:	*1923–1953*
hp/kW:	*40/29.3*
Cubic capacity:	*7925*
No. produced:	*160,000*

John Deere M

This light tractor was the successor to tractor types like the H, L and LA. It had a water-cooled, two-cylinder, Otto engine with 21 hp as well as a four-speed gearbox allowing speeds between 1.6 and 1.2 mph. There was also a narrow gauge version of this vehicle. The John Deere M sold very well: 70,000 were produced. Here is one from the first year of production.

Model:	*John Deere M*
Production period:	*1947–1952*
hp/kW:	*21/15.4*
Cubic capacity:	*1660*
No. produced:	*altogether 70,000*

John Deere MT

This tractor was introduced in 1949 and primarily designed for the cultivation and maintenance of row crops. In the broad-gauge version, its track width could be regulated, without gradation, between 96 and 132 cm. It weighed 1250 kg making it a lightweight in comparison to other tractors. The size of its back tyres was 9-24. Here is an example from the first year of production.

Model:	*John Deere MT*
Production period:	*1949–1952*
hp/kW:	*21/15.4*
Cubic capacity:	*1660*
No. produced:	*in total 70,000*

John Deere 40

This vehicle was the successor to the Model M and was introduced in 1953. It belonged to a new series of tractors that had different model designations. Letters were no longer used but instead, a numerical system based on the number 10. At first glance, it was difficult to identify which tractor was the successor of which. The John Deere 40 had 21 hp and so was the smallest of these new tractors. It had a powerful hydraulic system, which the driver could use whilst still in his seat. It also had a power take-off shaft. This example, which looks almost new, comes from the first year of production.

Model:	*John Deere 40*
Production period:	*1953–1956*
hp/kW:	*21/15.4*
Cubic capacity:	*1650*
No. produced:	–

John Deere 70

Power steering was a groundbreaking innovation on this vehicle, which replaced the Model G from 1937. It had a two-cylinder, twin-carburettor 52 hp diesel engine, which could actually be powered by either petrol, paraffin, liquid gas, diesel or distillates. It was thus an extremely powerful and versatile tractor. The one in the picture from 1955 is designed for root crops and has a double front wheel. In the row-crop version, the track width could be adjusted.

Model:	*John Deere 70*
Production period:	*1953–1956*
hp/kW:	*52/38.1*
Cubic capacity:	*7410*
No. produced:	–

John Deere-Lanz 100

This vehicle was built from 1962 and belonged to the group of models known as John Deere-Lanz. It had 18 hp making it the smallest in this new range and it was aimed above all at smaller farm businesses and as a second tractor for medium-sized businesses. It was a lightweight at 1300 kg and had a two-cylinder, four-valve, diesel engine with a six-speed gearbox. A regulated hydraulics system came as standard from 1964.

Model:	*John Deere-Lanz 100*
Production period:	*1962–1965*
hp/kW:	*18/13.2*
Cubic capacity:	*1183*
No. produced:	–

John Deere-Lanz 200

This was the last of the John Deere-Lanz series and it replaced the John Deere-Lanz 100. Its engine performance was 7 hp higher than that of its predecessor even though it had the same two-cylinder, four-valve, diesel engine. It was built using the frame construction method and was available with either a mower or a regulated hydraulics system.

Model:	*John Deere-Lanz 200*
Production period:	*1966–1968*
hp/kW:	*25/18.3*
Cubic capacity:	*1350*
No. produced:	*1240*

John Deere-Lanz 300

This vehicle was aimed particularly at medium-sized businesses. It came onto the market in 1960 just like the 500. It had a four-cylinder, short throttle, swirl chamber diesel engine with water-cooling, originally producing 28 hp and then, from 1963, 30 hp. Other features of the 300 – here is one from 1960 –, were disc brakes, a three-gears power take-off system and a ten-speed, group transmission.

Model:	*John Deere-Lanz 300*
Production period:	*1960–1964*
hp/kW:	*28–30/20.5–22*
Cubic capacity:	*2367*
No. produced:	–

John Deere 920

A new series, known as the 20s, came onto the market from 1964. At the same time, the name of Lanz disappeared as a tractor producer. The 920 was one of the smaller models in this series and had a water-cooled, three-cylinder, direct injection, diesel engine with, at first, 37 hp and then 41 hp from 1971. Both at the front and at the back it had a power take-off shaft and its sleeve gear shift with differential lock had eight forward and four reverse gears.

Model:	*John Deere 920*
Production period:	*1967–1974*
hp/kW:	*37–41/27.1–30*
Cubic capacity:	*2490*
No. produced:	–

John Deere 4020

This vehicle also belonged to the 20 series and came out in 1965. It was a heavy tractor with a top speed of 20 mph. A hydraulic system made it easy to steer this 3830-kg powerhouse. Power take-off shafts at both front and back came as standard. This one from 1965 has size 18.4-34 back wheels and a safety roll bar on its roof.

Model:	*John Deere 4020*
Production period:	*1965–1972*
hp/kW:	*100/73.2*
Cubic capacity:	*6637*
No. produced:	–

John Deere 2450

This model could be connected with a four-wheel drive if required. An all-purpose tractor, it was excellently suited to medium-sized businesses and its price-performance ratio was good. It had a four-cylinder diesel engine with 70 hp and its gearbox came with eight, twelve or sixteen forward gears and four or eight reverse gears.

Model:	*John Deere 2450*
Production period:	*1986–1992*
hp/kW:	*70/51.2*
Cubic capacity:	*3920*
No. produced:	–

John Deere 2650

This vehicle was fitted with a direct injection diesel engine with water-cooling an exhaust gas turbocharger, the latter providing extra performance. It was available as a standard version or a four-wheel drive. It weighed 3360 kg and was not cheap: in 1988 it cost about £12,000 without any extras.

Model:	*John Deere 2650*
Production period:	*1986–1994*
hp/kW:	*78/57.1*
Cubic capacity:	*3920*
No. produced:	–

John Deere 1950

The 50 series of tractors first came into production in 1986 and amongst these were the 2450, 2650 and also the 1950. New engine units were developed, the John Deere constant power engines, which distinguished themselves amongst other things by their low and thus economical use of fuel. Other innovations included a stronger power lift, a lightweight transmission unit, a power shift gear system with towing function and a higher top speed of up to 25 mph, which made the tractors a lot more suitable for use on the roads than they had previously been. The 1950 had a three-cylinder, direct injection, turbo diesel engine with 65 hp and this made it attractive for farm businesses with medium-sized areas under cultivation.

Model:	*John Deere 1950*
Production period:	*1988–1994*
hp/kW:	*65/47.6*
Cubic capacity:	*2940*
No. produced:	–

John Deere 2850

An exhaust turbocharger ensured that the four-cylinder diesel engine of this vehicle reached an impressive 86 hp. It was designed to cope with the workloads of larger businesses and could be fitted with an enclosed driver's cab. A vast number of customers chose the sound-insulated SG-2 cab, seen illustrated here. The 2850 was also available in an open version with safety roll bar and sun canopy.

Model:	*John Deere 2850*
Production period:	*1986–1994*
hp/kW:	*86/63*
Cubic capacity:	*3920*
No. produced:	–

John Deere 6310

This powerful tractor came onto the market in 1997 and had a water-cooled, four-cylinder, turbo diesel engine with direct injection and 100 hp. It also had a PowrQuad Plus transmission with automatic gear adjustment, a development of the earlier PowrQuad unit.

Model:	*John Deere 6310*
Production period:	*since 1997*
hp/kW:	*100/73.2*
Cubic capacity:	*4530*
No. produced:	–

John Deere 6110

The 6010 series appeared in 1997 and there were four, four-cylinder, diesel engined tractors in this range as well as four six-cylinder tractors. With only 80 hp, this was the weakest in this series. But this is only comparatively speaking, because it was a powerful and robust tractor. Together with its four-cylinder, turbo diesel engine it has a power shift gear transmission with either 16 or 24 forward and reverse gears. The special edition actually has 12 crawling gears.

Model:	*John Deere 6110*
Production period:	*since 1997*
hp/kW:	*80/58.6*
Cubic capacity:	*4530*
No. produced:	–

John Deere 6800

This vehicle was one of the 6000 series, which the firm had developed before the 6010 series. The 6000 series of tractors were no longer built using the block system and instead had all steel frames, which made them substantially stronger. The Type 6800 had the PowrQuad reverse gear system with differential lock, which came with a choice of 16- or 20-gear range shift system. On this tractor, the front wheel drive unit could be engaged whilst travelling and its six-cylinder, turbo diesel engine had 120 hp. The vehicle in the picture has the optional front loader.

Model:	*John Deere 6800*
Production period:	*1994–1997*
hp/kW:	*120/87.8*
Cubic capacity:	*6786*
No. produced:	–

John Deere 3050

This vehicle came onto the market in 1986 and was one of the first John Deere tractors with a six-cylinder diesel engine, producing 92 hp without turbo charging. The transmission had 8, 12 or 16 forward gears and the special edition had four-wheel drive. In 1987, a four-wheel drive 3050 cost around £18,000.

Model:	*John Deere 3050*
Production period:	*1986-1993*
hp/kW:	*92/67.3*
Cubic capacity:	*5883*
No. produced:	–

John Deere 5315

Compact, reliable and comfortable are the adjectives used to describe the 5015 series. The vehicles in this series have PowerTech engines which come with either three or four cylinders and are naturally aspirated or turbo diesel. The customer has a choice of four fully synchronised transmissions, from the 12/12 SynchroPlus reverse gear system up to the 24/12 Power Reverse with double power shift.

Model:	*John Deere 5315*
hp/kW:	*65/48*
Cubic capacity:	*2900*

John Deere 5515

Open tractors, that is to say, tractors without a driver's cab, are rather rare today. However, the vehicles of the 5015 series are available without a driver's cab. They are only requested, as a rule, where weather conditions remain constant in the long term. This vehicle, for example, is one of those open tractors. Clearly shown are a safety roll bar and a front loader.

Model: *John Deere 5515*
hp/kW: *80/59*
Cubic capacity: *4000*

John Deere 5820

The tractors of the 5020 series are true all-rounders. There are three, light, compact tractors, which not only have a high level of comfort for the driver but are also exceptionally robust and flexible. They are also, of course, very powerful. The 5820 is one of these tractors and is powered by a four-cylinder, Power-Tech engine, economic with fuel, and set on a frame that inhibits vibration. There are four varieties of transmission giving a possible top speed of 25 mph.

Model: *John Deere 5820*
hp/kW: *91/67*
Cubic capacity: *4530*

John Deere 6420 S

The five vehicles in the 6020 series are for medium-sized and larger businesses. Their engine performance varies, depending on the tractor, between 85 and 125 hp, the latter being the horsepower rating of the 6420 S. All these vehicles have the CAN-Bus electronic control system for the various instruments and devices. They also have Power-Tech engines, with electronic injection, intercooling, four-valve technology and common rail.

Model:	John Deere 6420 S
hp/kW:	125/92
Cubic capacity:	4530

John Deere 7920

The 7020 series is more powerful than the vehicles in the 6020 series. This series includes three tractors, from 182 to 215 hp, the Type 7920 being the most powerful. All the models in this range have six-cylinder, Power-Tech engines with common rail injection, which ensures, amongst other things, that the engine units are especially economical to use. The standard units have four-valve technology, as well as a turbocharger with air-to-air intercooling. They can reach a top speed of 31 mph.

Model:	*John Deere 7920*
hp/kW:	*215/158*
Cubic capacity:	*8100*

John Deere 8520

This vehicle is a real powerhouse. It has 335 hp, making it the most powerful of the five members of the 8020 series. It has the ILS individual sprung suspension mounting system, which ensures that the four-wheel drive tractor can move without any problem over even the most uneven and wet ground and yet can still run exceptionally smoothly on the road. As well as this, the 11-tonne lifting power of the rear hydraulics system may possibly be a record. In spite of the great technical complexity found in this giant tractor, it is easy to use. The most important control elements can be found on the right armrest of the driver's seat.

Model:	*John Deere 8520*
hp/kW:	*335/246*
Cubic capacity:	*8180*

John Deere 8520

It is very important to get the right tyres for the large tractors in this series. For this reason, a wide variety of tyres are available. In order to reduce the pressure on the ground, for example, there are double tyres on offer. The diameter of the back tyres goes up to 2050 mm. A wheel sensor and a spin regulator can minimise spinning of the wheels in particularly wet weather conditions.

Model:	*John Deere 8520*
hp/kW:	*335/246*
Cubic capacity:	*8180*

Kramer

Kramer Bros. in Gutmadingen at first developed agricultural machines before they turned their attention to tractors. However, from the first power mower in 1924 to the first proper Kramer tractor in 1936 was just a short hop. The K 12 looks, at first glance, like a very basic tractor but it could do everything. It was for this reason that people called it the *Allesschaffer* (Do everything). Even the models that Kramer produced after the war reminded one of this first tractor. Good sales of Kramer tractors, helped by the mechanisation of agriculture after the war, were soon followed by a collapse. Medium-sized businesses could not keep up with their big rivals. They still tried in the 1950s to broaden the range of products on offer, but they had to trim this range a decade later in order to be able to build the most practical tractors.

Kramer K 18

This was a model for the small farmer. It came onto the market in 1936, at first with a Güldner engine with 16 hp and then, from 1939, with another Güldner engine, this time producing 18 hp. The top speed of both of these was 10 mph, since both had the same four-speed gearbox. Clearly, the later model generally had slightly better performance.

Model:	*Kramer K 18*
Production period:	*1936–1949*
hp/kW:	*16–18/11.7–13.2*
Cubic capacity:	*1639*
No. produced:	–

Kramer K 12

Allesschaffer (Do everything) was the colloquial name given to the Kramer K 12, a small, farmers' tractor with 12 hp. It was tailored to the needs of the smallest farms and had an evaporation cooling system. It was very robust and, best of all, was great value for money. All these factors made it so very popular that waiting for 15 months for delivery was not a rare occurrence. The mudguards on the back wheels of the later vehicles were designed to be additional seats. This beautifully restored vehicle comes from the beginning of 1951.

Model:	*Kramer K 12*
Production period:	*1948–1950*
hp/kW:	*12/8.8*
Cubic capacity:	*1100*
No. produced:	–

Kramer KB 12

The Kramer KB 12 also had a 12 hp engine – to be more precise, a one-cylinder, Güldner, diesel unit with water-cooling. The Kramer transmission had six forward and two reverse gears and this small tractor actually weighed 1100 kg. Just like the K 12, the KB 12 was aimed at small farms, on which finally there was a desire to move from teams of animals to a motorised vehicle.

Model:	*Kramer KB 12*
Production period:	*1952–1953*
hp/kW:	*12/8.8*
Cubic capacity:	*810*
No. produced:	*1398*

Kramer KL 11

After World War II, Kramer could justifiably be regarded as the producer of good, value-for-money, small tractors. It did, indeed, produce larger tractors but the smaller ones were the real workhorses of this firm. The Kramer KL 11 had a Deutz F 1 L 612 air-cooled, one-cylinder, swirl chamber diesel engine, with a typical performance of 11 hp and so was very suitable for the small, rural businesses. It also had a five-speed gearbox from the Friedrichshafen gear system factory, allowing speeds between 1.7 and 12.3 mph.

Model:	*Kramer KL 11*
Production period:	*1953–1956*
hp/kW:	*11/8.1*
Cubic capacity:	*763*
No. produced:	*6312*

Kramer KA 250

This vehicle was introduced in 1956 and was directed at medium-sized concerns but also used by large businesses as their second tractor. It had a water-cooled, two-cylinder, Güldner 2 BN swirl chamber diesel engine, with 25 hp. Its Baugruppe II transmission had ten forward and two reverse gears. A power take-off shaft was an additional extra.

Model:	*Kramer KA 250*
Production period:	*1956–1958*
hp/kW:	*25/18.3*
Cubic capacity:	*1840*
No. produced:	–

Kramer KA 330

Kramer's larger models were nowhere near as successful as their small tractors, to which the KA 330 belonged and of which 352 were built. It had a Deutz F 3 L 612 air-cooled, three-cylinder, diesel engine, and its 33 hp made it quite powerful for its time. This meant that it was suited to farms with large areas to cultivate. The company's own transmission allowed speeds from 0.36 to 12.2 mph and it had ten forward and two reverse gears. This one comes from 1957 and has an all-weather roof and a Binger cable winch.

Model:	*Kramer KA 330*
Production period:	*1957–1958*
hp/kW:	*33/24.2*
Cubic capacity:	*2280*
No. produced:	*352*

Kramer Pionier S

At the end of the 1950s, there was clearly a change in the way the Kramer tractors were being modernised. They were fitted, according to the current vogue, with a rounded bonnet and a cushioned seat ensured greater comfort for the driver. The Pionier S had all these innovations and a one-cylinder Deutz diesel engine with air-cooling and 14 hp. Kramer had also included a newly developed five-speed gearbox with crawling gear.

Model:	*Kramer Pionier S*
Production period:	*1959–1962*
hp/kW:	*14/10.2*
Cubic capacity:	*763*
No. produced:	*971*

Kramer KL 150

Even in 1961, Kramer was still holding fast to the building of small unsophisticated tractors. The KL 150 came onto the market with, at first, a Deutz F 1 L 712 one-cylinder diesel engine. From 1965 this was replaced with the technically more advanced developed F 1 L 812, which still only had 14 hp. The Kramer Baugruppe I transmission was split into two groups. As standard, the tractor was fitted with a hydraulics system, power take-off with separate transmission and an adjustable track width.

Model:	*Kramer KL 150*
Production period:	*1961–1967*
hp/kW:	*14/10.2*
Cubic capacity:	*850*
No. produced:	*1365*

Kramer KL 400

During the production period of this vehicle, there was a change in the type of engine. From 1960 to 1964, a Deutz-Fabrikat F 3 L 712 was to be found under its well-rounded bonnet and thereafter a Deutz F 3 L 812. This meant an increase from 38 hp to 40 hp. This vehicle was clearly one of the larger tractors of its time and was amongst the best performing of the Kramer models. This example was built in 1962.

Model:	*Kramer KL 400*
Production period:	*1960–1967*
hp/kW:	*38–40/27.8–29.3*
Cubic capacity:	*2550*
No. produced:	*1466*

Landini

As with many other tractor producers, Landini's roots are in agricultural machinery, which they had been producing since 1884. It was only a small step from steam engines and combustion engines to tractors, which seemed so attractive. The first Landini tractor had 30 hp and was not dissimilar to the Lanz-Bulldog. Like the latter, they were fitted with a hot bulb engine and only the ventilator and radiator were arranged differently. After World War II, the company continued producing such vehicles, until they changed over to Perkins diesel engines in 1956. This change was caused by a crisis in sales but in spite of this, Landini was taken over by Massey-Ferguson in 1960. However, their brand name was retained.

Landini Super Velite 50/55 hp

As with the Lanz-Bulldogs of that era, a thermostatic siphoning cooling system ensured that the hot bulb engine of the Landini Super Velite of 1935 did not get too hot. This tractor was exceptionally powerful, producing 55 hp. Its four-speed transmission ensured that the tractor could reach speeds of between 1.9 and 9.9 mph. The vehicle weighed 3300 kg and was aimed mainly at the larger agricultural concerns.

Model:	*Landini Super Velite 50/55 hp*
Production period:	*1935–1942*
hp/kW:	*55/40.3*
Cubic capacity:	*9503*
No. produced:	–

Landini L 25

This vehicle appeared in 1946 and had, like Landini's pre-war models, a hot bulb engine working on a one-cylinder, two-valve process and 25 hp. It also had a four-speed gearbox with a reverse gear. This lovely L 25 comes from 1947.

Model: *Landini L 25*
Production period: *1946–1956*
hp/kW: *25/18.3*
Cubic capacity: *7222*
No. produced: –

Landini Landinetta

This vehicle was first produced in 1956 and as standard produced 15 hp. With a Roots compressor, the driver could attain a maximum performance of 18 hp. The engine unit was the newly developed one-cylinder two-stroke diesel engine, which was the company's own. With its five-speed gearbox, it could reach speeds of between 1.9 and 13.7 mph. Here is one from 1957.

Model: *Landini Landinetta*
Production period: *1956–1961*
hp/kW: *15–18/11–13.2*
Cubic capacity: *1236*
No. produced: –

Landini R 4000

This vehicle was built from 1960 and had a water-cooled three-cylinder Type A 3.152 diesel engine, with direct injection and 40 hp, along with an eight-speed transmission with two reverse gears. This vehicle weighed 1700 kg and it was designed to achieve speeds of between 8.1 and 15.3 mph. Here is an example from 1962. It belonged to the medium-size group of tractors of its time.

Model: *Landini R 4000*
Production period: *1960–1965*
hp/kW: *40/29.3*
Cubic capacity: *2500*
No. produced: –

Lanz

The Mannheim firm of Heinrich Lanz had a great deal to do with the mechanisation of German agriculture. The appearance of the Lanz HL crude oil tractor, which was still a traction engine, marked the beginning of the legendary history of the Bulldog – that Lanz tractor which would be developed and improved for decades to come. In 1921 it was the first tractor in the world to have a two-valve one-cylinder hot bulb engine. For years and decades to come, Lanz-Bulldogs would appear in a vast number of roles, including work in the fields, the pulling of the heaviest of loads, right up to being a construction vehicle. In Germany they had a 50 per cent market share, but they were also so popular abroad that half of the production was exported. It is no wonder that the Mannheim works were almost totally bombed out. After this, the firm not only did not have any manufacturing sites, they were also lacking in innovative ideas from the right kind of people. The company's management did not seem to recognise the strength of the competition from Deutz and Hanomag with their modern diesel tractors and continued with their hot bulb engines. Thus they rather sealed their own fate.

Lanz 12 hp, Type HL

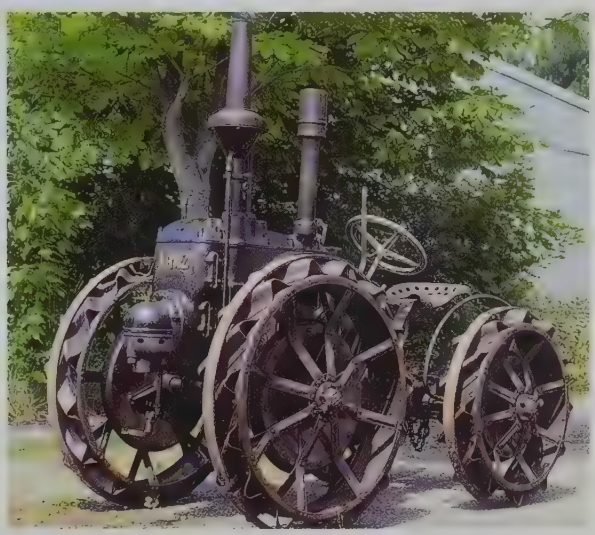
The Lanz crude oil tractor cannot conceal its relationship with the traction engine. The purpose of its construction was to replace animals in agriculture, in order to be able to move appliances like threshing machines from A to B. As well as being used as a towing vehicle, it could also be used as a unit to drive machines. This multiplicity of uses made the Bulldog a sensation at the German Agricultural Society exhibition in 1921.

Model:	*Lanz 12 hp, Type HL*
Production period:	*1921–1927*
hp/kW:	*12/8.8*
Cubic capacity:	*6220*
No. produced:	*about 6000*

Lanz 22/28 hp, Type HR 2

This heavy machine was suited to use on the roads because of its hard rubber tyres. It had no problem pulling the heaviest of loads at a top speed 8 mph. It had originally been developed for large estates, which needed larger machines. Smaller farms could not afford this expensive machine. This Bulldog had an evaporation cooling system and was the first German tractor to be produced on the production line.

Model:	*Lanz 22/28 hp, Type HR 2, Verkehrsbulldog*
Production period:	*1926–1931*
hp/kW:	*22/16.2*
Cubic capacity:	*10,338*
No. produced:	*7230*



Lanz 12 hp, Type HP

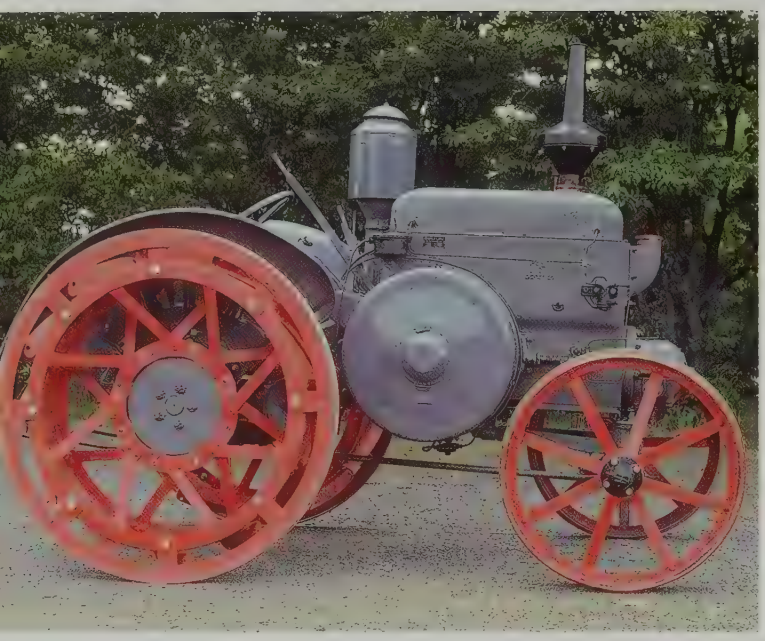
This Bulldog really catches the eye with its huge front wheels. The back wheels are also relatively big and all 4 wheels are fitted with ridges for work in the fields. This tractor was specially constructed for this work and it shows in the four-wheel drive and the articulated steering system, both very advanced technological developments for the time. If you wanted to use this vehicle on the road, there were hard rubber coverings available for the wheels. It was not especially powerful, with only 12 hp, and quite expensive, which is probably why it did not sell very well at all.

Model:	*Lanz 12 hp, Type HP (Knicklenker)*
Production period:	*1923–1926*
hp/kW:	*12/8.8*
Cubic capacity:	*6220*
No. produced:	*723*

Lanz 15/30 hp, Type HR 5

This vehicle was equipped with the so-called thermosyphon engine cooling system, which cut the use of water in the radiator by half compared to the evaporation cooling system. Instead of a cold water tank of 135 litres, the tractor referred to as the 'Cooler' Bulldog had one of only 60 litres. This tractor worked without a water pump using a closed system. Finding some way to lower the water consumption became necessary because, otherwise, export of these vehicles to warmer climatic regions, which were poor in water supplies, would have been put on jeopardy. Another innovation on the HR 5 was the spheroid mode, three-speed gearbox with a reverse gear.

Model:	*Lanz 15/30 hp, Type HR 5, Ackerbulldog*
Production period:	*1929–1935*
hp/kW:	*30/22*
Cubic capacity:	*10,338*
No. produced:	–



Lanz 22/28 hp, Type HR 2

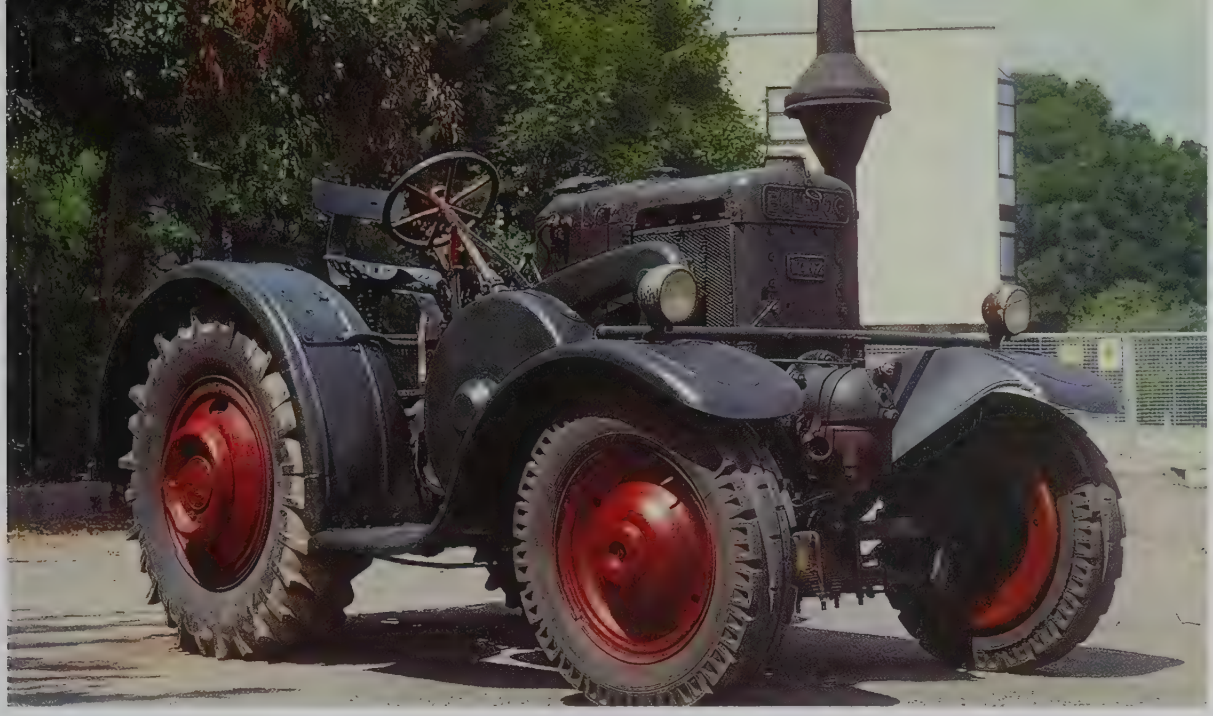
This vehicle with its iron wheels was particularly powerful – so powerful, in fact, that it could pull a three-blade plough when involved in deep ploughing. Its iron wheels without rubber or pneumatic tyres meant that it could only manage a top speed of 5 mph. Another handicap was having to pull its own weight of 3000 kg. This "Iron" Bulldog was constructed using the block construction system – the transmission and engine block functioning as the main structural component of the vehicle.

Model:	*Lanz 22/28 hp, Type HR 2, Eisenbulldog*
Production period:	*1926–1931*
hp/kW:	*22/16.2*
Cubic capacity:	*10,338*
No. produced:	*7230*

Lanz 22/38 hp, Type HR 5

A version of this vehicle for use on the roads usually had rubber coverings stretched over the back wheels. If the driver took out the charging bolt from the middle and fixed it on the running surface of the tyres, this would improve the traction on uneven and wet ground and so increase the pulling power of the vehicle. As extras came an electronic starter motor, a Bosch horn and a canopy.

Model:	*Lanz 22/38 hp, Type HR 5, Verkehrsbulldog*
Production period:	*1929–1935*
hp/kW:	*38/27.9*
Cubic capacity:	*10,338*
No. produced:	–



Lanz 15/30 hp, Type HR 5

The road version of this vehicle was particularly attractive with its mudguards connected to the running boards. So it looked more like a car than an agricultural vehicle. This rare example from 1930 is fitted with two injection pumps; after being started up with petrol, it could be switched over to using diesel. This ensured that the vehicle could be put into gear more quickly.

Model:	*Lanz 15/30 hp, Type HR 5, Verkehrsbulldog*
Production period:	*1929–1935*
hp/kW:	*30/22*
Cubic capacity:	*10,338*
No. produced:	–

Lanz 22/38/44 hp, Type HR 6

Lanz continued to build the 'Cooler' Bulldogs until 1935 and this vehicle, from the IIR 6 series, was one of them. It had 44 hp, which was exceptional for its time, although it could not produce this performance over a long period. This was, actually, the most powerful 'Cooler' Bulldog ever built. This example weighs in at 3300 kg and has iron wheels, giving it a top speed of only 5 mph.

Model:	*Lanz 22/38/44 hp, Type HR 6, Ackerbulldog*
Production period:	*1930–1935*
hp/kW:	*44/32.2*
Cubic capacity:	*10,338*
No. produced:	–

Lanz 15/30 hp, Type HR 5

The Moorbulldog is a comparatively rare model, specially made for wet and sandy ground. Its powerful and wide back wheels, which replaced the conventional back wheels, reduced the pressure on the ground so that it could be put into use working on moorland. Also available were caterpillar tracks for the back wheels, which again ensured reduced pressure on the ground.

Model:	*Lanz 15/30 hp, Type HR 5, Moorbulldog*
Production period:	*1929–1935*
hp/kW:	*30/22*
Cubic capacity:	*10,338*
No. produced:	–

Lanz 22/38 hp, Type HR 6

The Schwerzugbulldog (heavy pulling Bulldog) was a particularly powerful vehicle that could be fitted with either solid rubber or air tyres, and double tyres were even available for the back. Such tyres and, of course, its 38 hp, which was very powerful for its time, along with its transmission system, allowed it a top speed of 12.4 mph. The driver's seat was cushioned, although there was not actually a driver's seat as we know it today, but rather a kind of depression to sit in.

Model:	*Lanz 22/38 hp, Type HR 6, Schwerzugbulldog*
Production period:	*1930–1935*
hp/kW:	*38/27.9*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 7506

Looking at it today this vehicle evokes a feeling of nostalgia and yet it is still appealing to the eye. It has 25 hp and was a attractive vehicle due to its sprung front axle, electrical lighting system and starter motor. The one in this picture has additional extras, including back wheel mudguards and a windscreen.

Model:	*Lanz-Bulldog D 7506, Series HN 3*
Production period:	*1936–1952*
hp/kW:	*25/18.3*
Cubic capacity:	*4767*
No. produced:	*33,600 (until 1942)*

Lanz-Bulldog D 8506

The smallest of the Lanz tractors in the middle of the 1930s was the Ackerluft-Bulldog of the HR 7 Series, yet it had a very large engine capacity of 10 litres. The original engine unit produced 30 hp but from 1936, this was increased to 35 hp, giving it great pulling power. As standard it came with a six-speed gearbox, rear wheel drive, shell mudguards, an electrics system and a clutch with three flanges.

Model:	*Lanz-Bulldog D 8506, Series HR 7*
Production period:	*1934–1954*
hp/kW:	*30–35/22–25.6*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 7511

This vehicle, which was available from 1934, had a six-speed transmission with two reverse gears. It was a slimmer version of the 'Road' Bulldog. It could be fitted with either solid rubber or pneumatic tyres.

Model:	*Lanz-Bulldog D 7511, Series HN 3*
Production period:	*1934–1936*
hp/kW:	*20/14.6*
Cubic capacity:	*4767*
No. produced:	*around 100*

Lanz-Bulldog 30 hp, Type D 8506

Built in 1936, this tractor gave 30 hp and was one of the vehicles from this series with six forward gears. The D 8500 seemed rather better value for money but only had a three-speed transmission.

Model:	*Lanz-Bulldog D 8506, Series HR 7*
Production period:	*1934–1936*
hp/kW:	*30/22*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog 35 hp, Type D 8506

This D 8506 was built in 1940 and features a running board connecting the front and back mudguards. Whilst the windscreen and the canopy were on the original standard version, the tarpaulins on the side were only later added to this 35 hp vehicle.

Model:	*Lanz-Bulldog D 8506, Series HR 7*
Production period:	*1934–1954*
hp/kW:	*35/25.6*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog 35 hp, Type D 8500

Only a few of the remaining vehicles in the D 8500 series built in the 1930s still have their original iron wheels today, although they were all fitted with them. The pneumatic tyres of this one from 1937 with its all-weather roof are from a later date.

Model:	*Lanz-Bulldog D 8500, Series HR 7*
Production period:	*1936–1954*
hp/kW:	*35/25.6*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog 35 hp, Type D 8539

Amongst the features of these 35 hp tractors were a double seat, a folding canopy and a windscreen. Also coming as standard were the running boards connecting the front and rear mudguards. An air-brakes system was often added.

Model:	*Lanz-Bulldog D 8539, Series HR 7*
Production period:	*1936–1939*
hp/kW:	*35/25.6*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 8506

This vehicle was introduced in 1936 and had, as additional extras, mudguards and an air-brakes system for use with any attached appliances. This vehicle from 1941 has the brand name 'Eigenbau' on the driver's cab. It was still being used at the beginning of the 1990s.

Model:	*Lanz-Bulldog D 8506, Series HR 7*
Production period:	*1936–1954*
hp/kW:	*35/25.6*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 9506

This Bulldog from 1937 is fitted with electric lighting, a starter motor, a windscreen and a canopy. The shell mudguards above the back wheels were replaced on this model by side panels.

Model:	*Lanz-Bulldog D 9506*
Production period:	*1936–1955*
hp/kW:	*45/32.9*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 9506

Indeed, most of the Type D 9506 Bulldogs had a 45 hp engine, but this one from 1936 actually has a 38 hp hot bulb unit. It had a maximum speed of 14.4 mph.

Model:	*Lanz-Bulldog D 9506, Series HR 8*
Production period:	*1934–1936*
hp/kW:	*38/27.8*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 9538

This model from 1934 has a cable winch, as indicated by its series number. Like so many other similar vehicles, this one was presumably used as a towing vehicle. Transport companies often used these vehicles for this purpose in the 1930s. This vehicle has mudguards connected to the running boards and for special comfort has an upholstered seat.

Model:	*Lanz-Bulldog D 9538, Series HR 8*
Production period:	*1934–1936*
hp/kW:	*38/27.8*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 9531

This D 9531 Bulldog had 45 hp and was a very powerful model, excellent for use both on the roads and with attached appliances. When it was to be used as a towing vehicle, an air-brake system was usually fitted. This example has simple pneumatic tyres on the back wheels as well as a folding canopy and a windscreen. On request, an enclosed driver's cab was available.

Model:	Lanz-Bulldog D 9531, Series HR 8
Production period:	1936–1939
hp/kW:	*45/32.9*
Cubic capacity:	*10,338*
No. produced:	–

Lanz-Bulldog D 9006

During World War II, the German government ordered the building of tractors that could be powered by solid fuels rather than diesel or petrol. Germany was (and is) a country that was poor in raw materials and so supplies of fuel were reserved for those vehicles important for the war effort, like tanks. This Bulldog was therefore powered by wood or wood gas, which meant a reduction in performance compared to diesel engined vehicles. The weight of the tractor also increased: this example from 1943 weighs 3500 kg.

Model:	*Lanz-Bulldog D 9006,*
Production period:	*1943–1945*
hp/kW:	*40/29.3*
Cubic capacity:	*13,797*
No. produced:	*1017*

Lanz-Bulldog D 2539

This tractor from 1936 was a vehicle designed to be used in a very specialised and limited way. With 55 hp it was one of the most powerful mechanised models of its time and it still managed a top speed of 20 mph. It was hardly a lightweight either, weighing in at 4500 kg. As seen here, it came with a driver's cab and there was also a Cabriolet version with a windscreen and folding canopy. There are few remaining examples of the D 2539.

Model:	*Lanz-Bulldog D 2539, Series HR 9*
Production period:	*1936–1954*
hp/kW:	*55/40.3*
Cubic capacity:	*10,338*
No. produced:	*2415*

Lanz-Bulldog D 8506

Lanz resumed tractor production after World War II, producing similar models to those of the 1930s with hot bulb engines. This vehicle is one example of a medium-sized tractor from 1946, with 35 hp. The first tractors from this series were designed to use parts that were already available. Here is one from 1951.

Model:	*Lanz-Bulldog D 8506, Series HR 7*
Production period:	*1946–1955*
hp/kW:	*35/25.6*
Cubic capacity:	*10,338*
No. produced:	*more than 2581*

Lanz-Bulldog D 7506

This model was called the Lanz-Allzweck-Bulldog and its engine produced 25 hp. Because of its high ground clearance of 470 mm, it was suited for working on root crops and maintenance. It was sold as a successor to earlier 25 hp Bulldogs, and had an electric starter motor which, from 1951, was powered by a 12-volt system.

Model:	*Lanz-Bulldog D 7506, Series HN 3*
Production period:	*1950–1952*
hp/kW:	*25/18.3*
Cubic capacity:	*4767*
No. produced:	–

Lanz-Bulldog D 8506

This vehicle was built from 1946 and characteristics included a power take-off shaft and a six-speed transmission, as well as size 12.75-28 back tyres. It had a top speed of 11 mph and 35 hp. The side panels were standard equipment but mudguards, a windscreen and a roof, all seen in this picture, came as extras.

Model:	*Lanz-Bulldog D 8506, Series HR 7*
Production period:	*1946–1955*
hp/kW:	*35/25.6*
Cubic capacity:	*10,338*
No. produced:	*more than 2581*

Lanz-Bulldog D 8506

This example from 1949 has a wonderfully nostalgic feel to it. It has rounded mudguards both at the front and at the back, a fixed roof, windscreen, double seat and a triangular, trailer hitch. It was excellent for use on the roads and could even hold its own against the Verkehrsbulldog, which was specially designed for road use. Only its speed did not match up to that of the Verkehrsbulldog.

Model:	*Lanz-Bulldog D 8506, Series HR 7*
Production period:	*1946–1955*
hp/kW:	*35/25.6*
Cubic capacity:	*10,338*
No. produced:	*more than 2581*

Lanz-Bulldog D 1506

This was the last Bulldog to come onto the market and it was also the best-performing vehicle to be made by the company after the war. It was produced for five years and in the first two years, Lanz produced 394 of these 55 hp, hot bulb engined vehicles. It had a six-speed transmission giving it a maximum speed of 12.4 mph. This example from 1951 has an unsprung, forked, front axle.

Model:	*Lanz-Bulldog D 1506, Series HR 8*
Production period:	*1950–1955*
hp/kW:	*55/40.3*
Cubic capacity:	*10,338*
No. produced:	*394 (until 1951)*

Lanz-Bulldog D 2539

This vehicle was produced from 1945 and was very capable on the roads with its 55 hp engine. Obviously, the road version of this vehicle was faster than the version designed for work in the fields. In fifth gear, it reached its top speed of 18.1 mph. It was mainly used with attached equipment and it was available with a driver's cab, like this one from 1952, or without the cab.

Model:	*Lanz-Bulldog D 2539, Series HR 9*
Production period:	*1945–1954*
hp/kW:	*55/40.3*
Cubic capacity:	*10,338*
No. produced:	*508*

Lanz-Bulldog D 1706

From 1952 Lanz mostly dispensed with production using the hot bulb engine and started to equip their vehicles in the new series with a specially designed medium-pressure diesel engine of their own. This unit combined the advantages of a diesel engine with those of the hot bulb engine. This meant that, as before, it could be fuelled with low-grade oils and even the waste products from oil. In addition, like the traditional diesel engines, it was economical to use as well as robust and reliable. The tractors in these new series, like this D 1706 from 1954, had the circular Lanz emblem, showing a gear wheel and a garland of corn.

Model:	*Lanz D 1706, Series HE*
Production period:	*1952–1955*
hp/kW:	*17/12.5*
Cubic capacity:	*2256*
No. produced:	*7328*

Lanz D 2216

Even though it did not look like it, this vehicle was a transitional model, which replaced the D 2206 and shortened the waiting time for a completely new model. It had a 22 hp engine like its predecessor and a six-speed transmission. It also had the bonnet of the Lanz Bulldog with a full diesel engine, giving it a broader outline so that appeared more powerful than its predecessor.

Model:	*Lanz D 2216, Series HE*
Production period:	*1955*
hp/kW:	*22/16.1*
Cubic capacity:	*2256*
No. produced:	*1000*

Lanz D 2806

This vehicle produced by Lanz really was an all-purpose Bulldog. It was suitable for sowing and field crops and had tremendous pulling power. It had a half-diesel engine with 28 hp, size 9-42 back wheels, and it could carry attachments like a three- or four-point hydraulic power lift, a Wittenburg front loader, and a mower. This example comes from 1955.

Model:	*Lanz D 2806, Series HE*
Production period:	*1952–1955*
hp/kW:	*28/20.5*
Cubic capacity:	*3711*
No. produced:	–

Lanz D 3606

Developed from the D 2806, this 36 hp vehicle was also an all-purpose Bulldog, which could be used as a towing vehicle and for sowing and maintenance. Standard equipment included size 13-30 back tyres or, alternatively, size 11-38 wheels. It also came with a swinging front axle with single suspension and a power take-off unit. The special edition was almost identical to the D 2806.

Model:	*Lanz D 3606, Series HN*
Production period:	*1953–1956*
hp/kW:	*36/26.4*
Cubic capacity:	*3711*
No. produced:	*3340*

Lanz D 3206

This vehicle was introduced in 1955 and had the increased rpm of the engine from the D 2806 although its horsepower rating was increased by 4, taking it up to 32 hp. However, it was only in production for a short time. Its features included size 11-38 back wheels and a six-speed transmission; it weighed 2270 kg. This example from 1956 is fitted with a canopy.

Model:	*Lanz D 3206, Series HN*
Production period:	*1955–1956*
hp/kW:	*32/23.4*
Cubic capacity:	*3711*
No. produced:	–

Lanz D 5006

Many customers had been waiting a long time for a Lanz tractor to come onto the market with a half-diesel engine that gave comparatively high performance of 50 hp. This vehicle finally came along in 1955 and replaced the earlier, heavy Bulldogs with their hot bulb engines. But quite a few potential customers had, by this time, already acquired a tractor from a different manufacturer. The D 5006 was a vehicle with tremendous pulling power and could be put to use equally well with attached equipment, for pulling heavy loads and for heavy work in the fields. This example comes from 1956 and has a canopy and a windscreen.

Model:	*Lanz D 5006, Series HR*
Production period:	*1955–1958*
hp/kW:	*50/36.6*
Cubic capacity:	*7372*
No. produced:	–

Lanz D 5016

This vehicle – here is one from 1959 – also came onto the market in 1955. It was a variation on the D 5006 and it had, as standard, a crawling gear unit and a power take-off shaft integrated into the transmission with a double clutch. Three crawling gears as well as three reverse gears were included, together with the usual forward gears, and this heavy tractor could manage speeds between 0.75 and 11.4 mph.

Model:	*Lanz D 5016, Series HR*
Production period:	*1955–1962*
hp/kW:	*50/36.6*
Cubic capacity:	*7372*
No. produced:	–

Lanz D 6007

This vehicle, which came out in 1955, had a half-diesel engine and, for its time, had an exceptionally powerful 60 hp. It was the road version of the D 6006 and had the same engine performance. It had compressed air brakes for any attached equipment and, with its six-speed transmission, had a top speed of 18.6 mph. Available extras were an automatic trailer hitch for any attachments, power take-off shaft and a belt pulley. This open version Bulldog D 6007 left the factory in 1958.

Model:	*Lanz D 6007, Series HR*
Production period:	*1955–1960*
hp/kW:	*60/43.9*
Cubic capacity:	*7372*
No. produced:	–

Lanz D 6016

This vehicle was different from the original D 6006 because of its three additional crawling gears. Typically of Lanz, they understated the power of this tractor at 60 hp. In truth, over a period of time, it could actually achieve 66.1 hp and, presumably, this would have been even better over a shorter period of time. It is no wonder that it was regarded as being particularly strong and powerful. This example was built in 1957.

Model:	*Lanz D 6016, Series HR*
Production period:	*1955–1962*
hp/kW:	*60/43.9*
Cubic capacity:	*7372*
No. produced:	–

Lanz D 1616

Lanz introduced tractors with pure (full) diesel engines in May 1955. The D 1616 was one such vehicle and, with 16 hp, was the smallest of this type. Their engine units combined the advantages of the one-cylinder design with that of diesel technology. The D 1616 – here is one from the first series – was aimed particularly at small businesses but they were also of interest as a second tractor for larger concerns that had large areas of grassland, since they could easily be fitted with a side mower.

Model:	*Lanz D 1616, Series HE*
Production period:	*1955–1957*
hp/kW:	*16/11.7*
Cubic capacity:	*2256*
No. produced:	–

Lanz D 1616

From 1958, green and yellow paintwork began to appear on Lanz tractors, signifying that John Deere had taken over the company in October of 1956. Two years later, in 1960, the name was changed to John Deere-Lanz and this was emblazoned on the side of the engine's bonnet. This example comes from the last year of production and, as standard, came with three crawling gears and single wheel suspension.

Model:	*Lanz D 1616, Series HE*
Production period:	*1957–1960*
hp/kW:	*16/11.7*
Cubic capacity:	*2256*
No. produced:	*5402*

Lanz D 2816

This vehicle was introduced in 1955 and one of its features was a full diesel engine with 28 hp and 1100 rpm. The engine could be started up quite easily, in contrast to the half-diesel models, which were difficult to start: it could be pre-heated electronically from the driver's seat, which simplified things enormously. The pulling power of the D 2816 – here is one from 1955 – was 2040 kg and it had a top speed of 12.3 mph.

Model:	*Lanz D 2816, Series HE*
Production period:	*1955–1960*
hp/kW:	*28/20.5*
Cubic capacity:	*2617*
No. produced:	–

Lanz D 2816

In 1957, Lanz fitted its D 2816 series with three crawling gears and either an engine-driven power take-off shaft or two clutches, making this medium-range tractor more attractive to the buyer. Adding to its appeal, it came as standard with a one-cylinder, two-stroke, diesel engine and size 10-28 back wheels, although there was a choice of size for the back wheels. This lovely example comes from 1958.

Model:	*Lanz D 2816, Series HE*
Production period:	*1955–1960*
hp/kW:	*28/20.5*
Cubic capacity:	*2617*
No. produced:	–

Lanz D 6516

This vehicle from 1963 has been wonderfully restored by its owner. This model is a real rarity. It is a half-diesel Verkehrsbulldog with 65 hp and the owner has restored it according to the original designs. It was used in Australia and then exported to Belgium, finally coming back again to Germany.

Model:	*Lanz D 6516, Series HR*
Production period:	*1963*
hp/kW:	*65/47.6*
Cubic capacity:	*7372*
No. produced:	–

Lanz D 4016

Bearing in mind its engine performance, this vehicle really did have immense pulling power. It could pull 3352 kg on a tow bar. It weighed 2650 kg and yet was very easy to start because its engine had two heater plugs. This example has an all-weather roof and mudguards at the front, which were extra to the standard version.

Model:	*Lanz D 4016, Series HN*
Production period:	*1957–1960*
hp/kW:	*40/29.3*
Cubic capacity:	*4222*
No. produced:	*about 1000*

Lanz D 4016

This was the strongest Bulldog and was built from 1957 with the so-called 'full' diesel engine and 40 hp. It was, therefore, the strongest model ever built by Lanz and had a one-cylinder, two-stroke engine. Here is one from the first year of production. It filled a gap in performance ratings between the 36 hp and 50 hp half-diesel Bulldogs but customers regarded it as a Bulldog just like the others.

Model:	*Lanz D 4016, Series HN*
Production period:	*1957–1960*
hp/kW:	*40/29.3*
Cubic capacity:	*4222*
No. produced:	*about 1000*

Lanz D 1306

This vehicle was built from 1955 and did not have a Lanz engine but instead a one-cylinder, two-stroke diesel engine from Triumph-Werken-Nürnberg (TWN). It had 13 hp and was suited to smaller agricultural concerns. However, word soon got around that the engine was not always reliable and, for that reason, this model did not achieve any great sales success. The bonnet folded towards the front just like it did on Lanz's full diesel tractors.

Model:	*Lanz D 1306*
Production period:	*1955–1956*
hp/kW:	*13/9.5*
Cubic capacity:	*533*
No. produced:	*2350*

Lanz D 1666

This vehicle also did not have the company's own engine but instead the two-cylinder, four-stroke MWM KD 211 Z diesel unit, producing 16 hp. This engine was a lot more solid and needed less maintenance than that of the D 1306 and was a little more powerful. The tractor weighed 1040 kg, had a six-speed gearbox from ZF, a differential lock, transmission power take-off and an engine speed regulator, taking into account the size of the load. There was a large choice of extras, including a belt pulley, mower and grid wheels.

Model:	*Lanz D 1666*
Production period:	*1955*
hp/kW:	*16/11.7*
Cubic capacity:	*1250*
No. produced:	*596*

Lanz-Alldog A 1806

The search for a suitable engine unit for the Lanz-Alldog proved very difficult. It was finally found in the shape of the 18 hp, two-cylinder, four-stroke, MWM KD 211 Z diesel engine. This was just right for this vehicle, which was above all a vehicle to which equipment could be attached. Unfortunately, potential customers had already become aware that the engine formerly fitted in the vehicle was not without its faults and so the A 1806 had no real success. This example, with the attached mower, comes from the first year of production.

Model:	*Lanz-Alldog A 1806*
Production period:	*1956–1960*
hp/kW:	*18/13.2*
Cubic capacity:	*1248*
No. produced:	–

Lanz D 1206

This model was the successor to the D 1106, was built between 1958 and 1960 and was characterised by its green and yellow paintwork. This small tractor – here is one from 1959 – had 12 hp, weighed only 770 kg and had a top speed of 11.3 mph. As standard, from December in the first year of production, it came with a hydraulic, three-point power lift, as is the case with the tractor in this picture.

Model:	*Lanz D 1206*
Production period:	*1958–1960*
hp/kW:	*12/8.8*
Cubic capacity:	*533*
No. produced:	–

MAN

Maschinenfabrik Augsburg-Nürnberg AG, referred to as MAN for short, began in the 1920s building motorised ploughs, but it was only in 1938 that they brought their first tractor onto the market: the AS 250. The outbreak of war prevented further manufacture of this series and after the end of the war, MAN offered its customers modern technology in the shape of the AS 325 diesel engine with four cylinders. This was the legendary 'Ackerdiesel' engine. It had an excellent level of workmanship and was the basis for all further MAN models, which always managed to achieve a high place amongst their competitors in their respective classes. It was probably their prices that meant that MAN could never actually rise into the topmost group of new registrations, even though most of the models had four-wheel drive.

MAN AS 325 H

This vehicle had 25 hp and was a four-wheel drive multi-purpose tractor. The front wheel drive of this exceptionally powerful tractor could be engaged, when necessary, with no problem at all. It had a five-speed gearbox and an electric starter motor and when on the roads could pull a load of 12 tonnes in total. Extras on this tractor – here we see an Ackerdiesel AS 325 H from 1951 – included a mower with a drive unit, a cable winch, power take-off shaft, belt pulley, double tyres and ground chains.

Model:	*MAN AS 325 H*
Production period:	*1951–1952*
hp/kW:	*25/18.3*
Cubic capacity:	*2675*
No. produced:	–

MAN AS 325 H

This four-wheel drive Type AS 325 H tractor, with a roof and a windscreen, dates from the year 1952 and is actually ready for use just as it was then – this is plain to see. Its four-cylinder, four-stroke diesel engine had spherical combustion chambers and was protected against running too hot by a water-cooling system. It weighed 2150 kg and innumerable extras included a crawling gear, which was of particular use for maintenance work.

Model:	*MAN AS 325 H*
Production period:	*1951–1952*
hp/kW:	*25/18.3*
Cubic capacity:	*2675*
No. produced:	–

MAN B 45 A

Its 45 hp made this vehicle amongst the most powerful of MAN's tractors in the middle of the 1950s. It was a very capable vehicle with four-wheel drive and a water-cooled, four-cylinder, four-stroke, diesel engine, which worked on the principle of combustion at the centre of a spherical chamber. It had a seven-speed gearbox, which ensured that this formidable machine could be used for a multitude of purposes.

Model:	*MAN B 45 A*
Production period:	*1955–1956*
hp/kW:	*45/32.9*
Cubic capacity:	*3186*
No. produced:	–

MAN A 25 A

This vehicle was four-wheel drive and had a two-cylinder M engine with 25 hp. It was chiefly aimed at medium-sized businesses since it was powerful and, because of its four-wheel drive, it could be used on almost any kind of surface. However, even large concerns used it as it was really excellent for maintenance work due to its ground clearance of 400 mm.

Model:	*MAN A 25 A*
Production period:	*1956–1957*
hp/kW:	*25/18.3*
Cubic capacity:	*1840*
No. produced:	–

MAN B 18 A

This vehicle was introduced in 1955 and had the company's own M engine with 18 hp. It was also very economical with fuel. It worked on the central swirl chamber combustion process, in which an artificially produced swirl of air ensured combustion. This was in contrast to the traditional diesel engines, where the fuel was injected directly into the chamber. This B 18 A, which could already enjoy the advantages of the new engine, was built in 1956.

Model:	*MAN B 18 A*
Production period:	*1955–1957*
hp/kW:	*18/13.2*
Cubic capacity:	*1304*
No. produced:	–

MAN C 40

This vehicle, which was introduced in 1956 with four-wheel drive and rear-wheel drive versions, clearly had the new energy-saving M engine. It performed extremely well with its 40 hp and, when in use on the roads was capable of pulling loads of up to 20 tonnes, as well as being suited to all other types of work. This beautifully restored vehicle comes from 1957.

Model:	*MAN C 40*
Production period:	*1956–1957*
hp/kW:	*40/29.3*
Cubic capacity:	*2925*
No. produced:	–

MAN 4 R 1

This vehicle was first produced in 1957 and amongst the features with which it could demonstrate its talents were a water-cooled. four-cylinder, M diesel engine with a powerful 40 hp, and a five-speed transmission with an additional crawling gear group for speeds from 0.5 mph. It was designed mainly for large concerns and to be used on the roads, since it could pull attached loads of up to 27 tonnes. It weighed 2640 kg – here is one from 1957.

Model:	*MAN 4 R 1*
Production period:	*1957–1960*
hp/kW:	*40/29.3*
Cubic capacity:	*3473*
No. produced:	–

MAN 2 K 3

This vehicle weighed 1240 kg and it could pull loads of 15 tonnes. Its comparatively small 18 hp would not allow it to pull any larger loads – it was mainly aimed at small businesses. It had a two-cylinder M diesel engine and a six-speed gearbox. Here is one from 1961.

Model:	*MAN 2 K 3*
Production period:	*1958–1962*
hp/kW:	*18/13.2*
Cubic capacity:	*1300*
No. produced:	–

MAN 4 S 2

It was not by pure chance that a cable winch was one of the extras provided on this vehicle. In fact, this 50 hp top-of-the-range model from MAN, dating the late 1950s, had been developed for work in woods and forests. Naturally, this four-wheel drive vehicle was also supremely well equipped for work on the roads and in the fields. It could also be fitted with a three-point hydraulics system and a compressed air brake system. This example from 1960 is certainly a very imposing vehicle.

Model:	*MAN 4 S 2*
Production period:	*1957–1960*
hp/kW:	*50/36.6*
Cubic capacity:	*3927*
No. produced:	–

MAN 2 L 3

This medium-sized tractor produced from 1958 was destined for the export market. It had a 25 hp, two-cylinder, diesel engine produced by the company itself using the M combustion system. Amongst its other features was a six-speed gearbox. It weighed 1370 kg. MAN stopped producing this vehicle in 1960 because they wanted to rationalise their tractor production and at that time had too many models on offer. This example comes from the final year of production.

Model:	*MAN 2 L 3*
Production period:	*1958–1960*
hp/kW:	*25/18.3*
Cubic capacity:	*1850*
No. produced:	–

MAN 4 L 2

This small four-wheel drive tractor was designed particularly for work on uneven, hilly land or wet, heavy ground. It was a real all-rounder – as a glance at the innumerable accessories will testify. It came with a 2.5 tonne cable winch, a front loader, a belt pulley and a power lift with three-point attachment system. Naturally, it also had the M engine: a two-cylinder diesel unit with 25 hp. This tractor – here is one from the last year of production – also had a six-speed gearbox and weighed 1590 kg.

Model:	*MAN 4 L 2*
Production period:	*1960–1961*
hp/kW:	*25/18.3*
Cubic capacity:	*1670*
No. produced:	–

MAN 4 R 3

This powerful machine with its 45 hp M engine was the leading model in the range of MAN tractors produced at the start of the 1960s. A four-wheel drive tractor – here is one from 1962, it was suitable for all kinds of work, including on the roads, in the woods and in the fields and, with its high ground clearance of 400 mm, it was even effective for maintenance work. It did not have four-wheel drive, but was a very steady vehicle, supremely well suited for use in mountainous areas and on uneven terrain.

Model:	*MAN 4 R 3*
Production period:	*1961–1963*
hp/kW:	*45/32.9*
Cubic capacity:	*2560*
No. produced:	–

Massey-Harris

Massey-Harris were arguably the most important tractor producer in Canada. The double-barrel name came about in 1891 through the fusion of the two companies with those names. They were involved for a while in some areas of manufacturing linked to tractor building but it was not until they purchased a tractor factory in 1928 that they actually became makers of the vehicles themselves. Their introduction of an articulated steering system pointed the way to the future, and this progress was maintained with the Twin Power tractors from 1938. Production stopped in Toronto from 1948 but moved to Great Britain, first to Manchester and then to Kilmarnock in Scotland.

Massey-Harris 15/22 General Purpose

This very powerful model had articulated steering, iron wheels and four-wheel drive, its front wheels having a bigger diameter than its rear ones. With a powerful 25 hp and a three-speed transmission, it could reach a top speed of 3.7 mph. It weighed in at 1600 kg.

Model:	*Massey-Harris 15/22 General Purpose*
Production period:	*1929–1938*
hp/kW:	*25/18.3*
Cubic capacity:	*4014*
No. produced:	–

Massey-Harris 44 K

This vehicle was brought out by Massey-Harris in 1946 and proved to be a great success: 90,000 were sold in nine years of production. It had a water-cooled, four-cylinder, 34 hp Otto engine, a six-speed transmission and size 13-30 rear wheels or – as seen in this picture – size 13-38. It weighed 1865 kg.

Model:	*Massey-Harris 44 K*
Production period:	*1946–1955*
hp/kW:	*34/24.9*
Cubic capacity:	*4222*
No. produced:	*90,000*

Massey-Harris 744 D

The 744 D, originally called the 744 PD, was based on the 44 K. It was first produced in Manchester and then later in Kilmarnock in Scotland. Instead of the 44 K's four-cylinder engine, it had a water-cooled, 45 hp, six-cylinder diesel unit from Perkins. Its five-speed gearbox, with a reverse gear, enabled it to reach speeds of between 2.5 and 14.2 mph. Here is one from 1950.

Model:	*Massey-Harris 744 D*
Production period:	*1948–1957*
hp/kW:	*45/32.9*
Cubic capacity:	*4730*
No. produced:	*28,000*

Massey-Harris 820

The small 820, weighing just 1000 kg, came onto the market in 1957 and remained on sale for two years. It was aimed mainly at small businesses and also as a second tractor for larger concerns that needed to acquire another vehicle for sowing and maintenance work. It had a two-cylinder, two-stroke, Hanomag diesel engine with water-cooling and a compressed air blower and with its 20 hp it achieved 1800 rpm. Its maximum speed was 9.3 mph, made possible by a five-speed transmission with reverse gear. This lovely example was built in 1957.

Model:	*Massey-Harris 820*
Production period:	*1957–1959*
hp/kW:	*20/14.6*
Cubic capacity:	*1021*
No. produced:	–

McCormick

As one of the oldest producers of tractors, McCormick joined up with Deering in 1902 to become the International Harvester Company. In spite of this, IHC retained the brand name of McCormick for its models. For a while after this, there were no new McCormick models but since 2000 Landini has been producing under this name following the takeover of the production works in Rotherham by Case.

McCormick F 85

The F Series consists of seven, four-wheel drive tractors created chiefly for work on plantations. The F 85, with its 92 hp, is one of the larger models in this series. The F 60 with 54 hp is the smallest and the biggest is the F 105 with 98.5 hp. These vehicles have the Perkins three- or four-cylinder diesel engines with direct injection and a 15/15 reverse gear unit, which is fully synchronised. This F 85 does not have a fixed driver's cab like most of the tractors built today and only has a roll bar.

Model:	*McCormick F 85*
hp/kW:	*92/68*
Cubic capacity:	*4400*

McCormick CX 105

These tractors from the CX Xtra-Shift Series come fitted as standard with a three-speed Powershift/Powershuttle unit, which includes 24 forward and reverse gears; If required, this can be increased to 36 gears, giving the vehicles a top speed of 24.9 mph. This means that they are excellent for use on the roads. This CX 105 with its powerful 102 hp is fitted with a low roof, which is an extra.

Model:	*McCormick CX 105*
hp/kW:	*102/75*
Cubic capacity:	*4000*

McCormick MTX 185

This vehicle's engine produces an extraordinary 197 hp. However, it does not have the best performance of all in the MTX series. The largest tractor in the series has 204 hp and even the 'smallest' has over 118 hp. This particular vehicle has a six-cylinder, BetaPower turbo engine with water-cooling, 24 valves and a common rail fuel injection system. All these special features ensure that the engine unit is economical with fuel and low in emissions. As standard come a Powershift/Powershuttle reverse gear unit, which can include a maximum of 32/24 gears, a power take-off shaft and hydraulics.

Model:	*McCormick MTX 185*
hp/kW:	*197/145*
Cubic capacity:	*6750*

McCormick ZTX 280

Even more powerful than the tractors of the MTX Series are the tractors of the ZTX series, which all have four-wheel drive. The biggest of these is the ZTX 280, which has a water-cooled, six-cylinder, Cummins turbo diesel engine with 24 valves, emission control, intercooling and 280 hp. The electronic Quantum System steering of the engine ensures that the performance of the unit independently adjusts to the various loads and climatic conditions it comes up against. It weighs 10,500 kg – a truly heavy tractor!

Model:	*McCormick ZTX 280*
hp/kW:	*280/209*
Cubic capacity:	*8300*

McCormick MC 115

The MC Series consists of five medium-sized tractors. Their range of performance is between 84 and 132 hp. So the MC 115, with its 115 hp, belongs to the medium-performance range. The tractors have water-cooled, four-cylinder, diesel engines and each has a four-stage Powershift transmission with a wet clutch and Powershuttle. These vehicles can be put to use in all areas of agricultural work and, because of their relatively small turning circle, they are very easy to manoeuvre. As extras there is a low cab with folding windows and air-conditioning.

Model:	*McCormick MC 115*
hp/kW:	*115/85*
Cubic capacity:	*4000*

McCormick MC 135 Power 6

This vehicle from the MC Series is the strongest with its 132 hp. A later addition to the range, it differs in a few ways from the other models. Instead of a four-cylinder, diesel engine, it has a six-cylinder unit with electronic steering. The four-wheel drive model is suitable for all surfaces including, naturally, uneven and hilly terrain. This example is additionally fitted with a front loader.

Model:	*McCormick MC 135 Power 6*
hp/kW:	*132/97*
Cubic capacity:	*6000*

McCormick MTX 125

This vehicle is one of the new models in the MTX Series, and its engine is mounted in a cast rubber chassis. With 118 hp it is regarded as a medium-sized tractor and so is suitable for medium-sized as well as large businesses. Its four-stage Powershift transmission with combined group-switching ensures that it is possible to switch gear under a full load in four stages, without the tractor having to stop.

Model:	*McCormick MTX 125*
hp/kW:	*118/86*
Cubic capacity:	*6700*

Minneapolis-Moline

As early as 1889, the Minneapolis Threshing Machine Company was producing agricultural machines driven by steam and its first large tractor was built in 1911. The A 16-30 was a further development, and had a water-cooled, four-cylinder, Otto engine. It was in production for 10 years until the company changed its name to the Minneapolis-Moline Company after a merger. The M-M tractors continued to have a good reputation until the 1950s.

Minneapolis Type A 16-30

This 2680 kg vehicle appears very elegant and it was first built in 1919. It had a 30 hp, water-cooled, four-cylinder, Otto engine, which had four valves per cylinder. It could use either petrol or paraffin as fuel. It also had a transmission with two switching stages.

Model:	*Minneapolis Type A 16-30*
Production period:	*1919–1929*
hp/kW:	*30/22*
Cubic capacity:	*5304*
No. produced:	–

Minneapolis-Moline UTU

The UTU was the row-crop variation of the Model U. It was in the firm's sales programme for 16 years. During the war, it was available in two variants, with either pneumatic tyres or iron wheels. Its six-speed transmission allowed speeds of between 2.7 and 14.8 mph. It had a paraffin-driven, water-cooled, four-cylinder, Otto engine producing 32 hp. This one was made in 1945.

Model:	*Minneapolis-Moline UTU*
Production period:	*1938–1954*
hp/kW:	*32/23.4*
Cubic capacity:	*4415*
No. produced:	–

Minneapolis-Moline R

The Minneapolis-Moline R had a water-cooled, four-cylinder, Otto engine, which also ran on paraffin. The R was introduced a year after the UTU and was slightly less powerful at 27 hp. Its transmission had four switching stages, allowing the tractor speeds of between 2.6 and 13.3 mph.

The steering column linkage of the golden yellow tractor – this one is a standard model – can be seen along the side of the engine. Its back wheels were of size 10-38. There were various row-crop versions of this tractor on offer.

Model:	*Minneapolis-Moline R*
Production period:	*1939–1951*
hp/kW:	*27/19.8*
Cubic capacity:	*2574*
No. produced:	–

New Holland

The brand name New Holland, under which not only tractors but also agricultural machinery is sold, belongs to the Fiat company. The dark blue tractors are built in Italy, Great Britain and Canada and, since 1993, they have increasingly been seen in Germany.

New Holland TL 100

The TL Series comprises four vehicles of 65 to 95 hp and the TL 100 is the largest of these. It has a four-cylinder turbo diesel engine, is very manoeuvrable and can be used for virtually all kinds of work. It has a 24 reverse gear system and is available in different versions, like the Shuttle Command, Split Command and Dual Command with Powershuttle.

Model:	*New Holland TL 100*
Production period:	*since 1999*
hp/kW:	*95/69.5*
Cubic capacity:	*3908*
No. produced:	–

New Holland TS 100

The four vehicles in the TS Series have naturally aspirated diesel engines or turbo diesel engines and cover an area in performance between 90 and 110 hp. The TS 100 lies right in the middle of this range with its four-cylinder, turbo diesel unit and 99 hp. Its engine unit allows this medium-sized tractor to be used in all areas of work. It weighs 4470 kg and the buyer can choose either an Electroshift reverse gear system with 16 gears or a Dual-Command unit with 24 switching stages. With its hydraulics it can move loads of 6570 kg.

Model:	*New Holland TS 100*
Production period:	*since 1999*
hp/kW:	*99/72.5*
Cubic capacity:	*4987*
No. produced:	–

New Holland TG 285

The New Holland TG Series included three large tractors with performances of 231, 258 and 283 hp, making them all real powerhouses. The TG 285 is the most powerful of them all. They all have six-cylinder, turbo diesel engines with intercooling. Comfort features include a sprung cabin and air-cushioned driver's seat which has a has a sensor registering and absorbing bumps, irrespective of how big or heavy the driver is.

Model:	*New Holland TG 285*
hp/kW:	*283/208*
Cubic capacity:	*8300*

New Holland TG 285

One of the features of these enormous tractors in the TG Series is the transmission, which is switchable under a full load. It is a switchable, reverse gear system with 18 forward gears, with automatic functions that can be employed in the fields or on the road. The rear hydraulics system of this vehicle has a lifting power of 10,203 kg. The vehicle in the picture appears even more powerful with its double tyres than it actually is.

Model:	*New Holland TG 285*
hp/kW:	*283/208*
Cubic capacity:	*8300*

New Holland TN 70 DA

This series comprises six tractors ranging between 59 and 76 hp. All of these vehicles are four-wheel drive. They have Iveco naturally aspirated or turbo diesel engines, each with three cylinders. These compact tractors are exceptionally manoeuvrable and are quite adequate as the only tractor for smaller and medium-sized businesses. For the transmission the customer can choose between the Shuttle, the Split and the Dual Command versions, all having a top speed of 24.9 mph.

Model:	*New Holland TN 70 DA*
hp/kW:	*72/53*
Cubic capacity:	*2930*

New Holland TM 175

This vehicle has 177 hp and is the second most powerful vehicle in this series. With the help of the Motor Management System, it can increase its performance to 223 hp and this makes it really a giant among tractors. The lifting power of the rear hydraulics has an impressive maximum of 8647 kg. The Terraglide/SuperSteer front axle helps absorb bumps when the vehicle is travelling over uneven terrain.

Model:	*New Holland TM 175*
hp/kW:	*177/130*
Cubic capacity:	*7480*

New Holland TN 70 SA

Comparatively small, manoeuvrable and robust – these features all make this tractor very attractive. Its turning angle can be as high as 76 degrees, enabling it to be easily steered and, for a vehicle of its size, its turning circle is very small. The vehicles provide a high level of comfort for the driver and a fantastic all-round field of vision. Automatic switching to four-wheel drive ensures that the vehicle can progress extremely well on slippery or uneven surfaces.

Model:	*New Holland TN 70 SA*
hp/kW:	*72/53*
Cubic capacity:	*2930*

Normag

The abbreviation Normag stands for Nordhäuser Maschinenbau GmbH – the machine manufacturer of Nordhaus (in Germany's Harz region). They first moved into the lucrative market of tractor building in 1938 with the Model G 22. After the end of the war, the company relocated from the Soviet Zone of occupation to Hattingen in the Ruhr. Their first tractor produced here, the NG 23 K, had a power lift system driven by compressed air to which various appliances could be attached. The small NG 16 C with its double-sprung front axle was such a strong sales success that Normag rose to the top of the list of new registrations in Germany in the 1950s.

Normag NG 22

Normag's first model came on-stream in 1938. This was the NG 22, a small tractor with 22 hp and a water-cooled, two-cylinder, four-stroke diesel engine from MWM. It had a four-speed transmission, giving it speeds of up to 10.9 mph, a sprung front axle and it weighed 1850 kg.

Model:	*Normag NG 22*
Production period:	*1938–1942*
hp/kW:	*22/16.1*
Cubic capacity:	*2120*
No. produced:	*4972*

Normag NG 22

The NG 22 could take loads of 15 tonnes along the roads. It was popular mainly in the central regions of Germany and can still be seen even today in Austria, although not normally in active use. This vehicle was built in 1939 and has remained in the hands of the same family, although it has been restored several times of course. In the photo can be seen a mower unit and a mower bar.

Model:	*Normag NG 22*
Production period:	*1938–1942*
hp/kW:	*22/16.1*
Cubic capacity:	*2120*
No. produced:	*4972*

Normag NG 25

German tractors built during World War II according to government instructions, and fuelled by wood gas, all looked pretty much the same. The reason was that the government wanted to have a series of tractors whose parts could be switched and shared even if they were made by different manufacturers. After the war, the manufacturers soon returned to the production of tractors driven by liquid fuels. This NG 25 had a Prometheus, four-speed transmission and could reach a top speed of 12.3 mph.

Model:	*Normag NG 25 Generator Tractor*
Production period:	*1942–1945*
hp/kW:	*25/18.3*
Cubic capacity:	*4592*
No. produced:	*about 2000*

Normag NG 20

The NG 20 was produced in 1952 under the name of Faktor II, which was generally better known than its actual name. It replaced the NG 23 K built between 1948 and 1952. It had the company's own two-cylinder diesel engine with water-cooling and it originally produced 20 hp, increased later to 22 hp, making it somewhat less powerful than its predecessor, which managed 25 hp. It was also 150 kg less heavy, at 1450 kg. This beautifully restored example was built in 1952.

Model:	*Normag NG 20*
Production period:	*1952–1954*
hp/kW:	*20–22/14.6–16.1*
Cubic capacity:	*2112*
No. produced:	–

Normag NG 16 A

The NG 16 was actually usually referred to by the name Kornett II and was produced from 1954. It had the company's own one-cylinder diesel engine, which worked on the two-valve system with direct injection and a compressed air cooling system. This was extremely economical to use and one of the reasons why the NG 12, which was also built from 1954 and better known under the name of Kornett I, was given the same engine.

Model:	*Normag NG 16 A*
Production period:	*1954–1956*
hp/kW:	*16/11.7*
Cubic capacity:	*1289*
No. produced:	–

Normag NG 20

The NG 20 was undoubtedly one of Normag's most successful models because it was tailored to suit the needs of smaller and medium-sized concerns. Normag also produced tractors in the 1950s that were more powerful, with up to 45 hp, but in general these did not sell as well; they were dearer and such high-performance vehicles were not needed so much at that time. Here is an NG 20 from 1952.

Model:	*Normag NG 20*
Production period:	*1952–1954*
hp/kW:	*20/14.6*
Cubic capacity:	*2112*
No. produced:	–

Normag K 12 A

This really was a small tractor, with just 12 hp, built by the block construction method. It was also known as the Kornett I and had a one-cylinder, two-stroke, Type L 114/12 B-1diesel engine made by the company. It stayed in Normag's range for two years and had, as standard, a five-speed transmission with a differential lock.

Model:	*Normag K 12 A*
Production period:	*1954–1956*
hp/kW:	*12/8.8*
Cubic capacity:	*1282*
No. produced:	–

Normag NG 35 A

This vehicle also had the company's own engine – a water-cooled, two-cylinder, four-stroke, BM 35 diesel unit with 35 hp, thus making it the most powerful Normag vehicle. With the help of its five-speed transmission it could reach a top speed of 11.8 mph and was suitable for all large businesses.

Model:	*Normag NG 35 A*
Production period:	*1950–1953*
hp/kW:	*35/25.6*
Cubic capacity:	*3120*
No. produced:	–

Normag NG 45 L

This was the most powerful Normag model in the early 1950s, with 45 hp being produced by its four-cylinder, four-stroke, Henschel 516 DF diesel engine. This particular engine unit worked on the Lanova air accumulation principle. Only a few of these mighty vehicles were sold. The NG 45 L's five-speed transmission gave it a maximum speed of 16.2 mph.

Model:	*Normag NG 45 L*
Production period:	*1952–1955*
hp/kW:	*45/32.9*
Cubic capacity:	*3180*
No. produced:	–

Nuffield

In order to save Great Britain's foreign currency reserves after World War II, Lord Nuffield guided the William Morris company in the production of agricultural tractors. Thus the M 4 came onto the market in 1948 and convinced customers of its reliability. Following models were based on this well-designed original machine and only slight changes were made. The takeover by British Leyland in 1969 was the beginning of the end for Nuffield tractors and production came to an end in 1972.

Nuffield Universal M 4

A tractor built and developed in England was the goal of Lord Nuffield after World War II, together with the car manufacturer William Morris. The M 4 was built from 1948 and successfully competed against the imported American vehicles. Its four-cylinder, Otto engine, which had been produced in collaboration with the Swiss firm Saurer, had a strong 38 hp. From 1950, a Perkins diesel engine was also available. It had a five-speed transmission and a hydraulics system. Here is one from 1953.

Model:	*Nuffield Universal M 4*
Production period:	*1948–1954*
hp/kW:	*38/27.8*
Cubic capacity:	*3154*
No. produced:	–

Nuffield Universal 3

This vehicle became part of the range of Nuffield tractors in 1953. It had a three-cylinder diesel engine with water-cooling and 2000 rpm with 35 hp – hence it was somewhat less powerful than its 'big brother', the Universal 4, the Mark 2 version of which had 56 hp. It weighed 1655 kg, so it was also about 400 kg lighter. Its five-speed transmission gave it speeds up to 14.1 mph. There was a choice of back wheels between sizes 10 or 11-28.

Model:	*Nuffield Universal 3*
Production period:	*1957–1962*
hp/kW:	*35/32.9*
Cubic capacity:	*2553*
No. produced:	–

Nuffield Universal M 4

The four-wheel-drive version of this vehicle – here is one from 1958 – caught one's immediate attention because of its massive tyres, which enabled it to move over the most difficult of surfaces. The four-cylinder diesel engine with water-cooling came from the BMC lorry production company and had 4 hp more than that of the standard model. Also available on the Universal M 4 four-wheel-drive version were power take-off shaft, belt pulley and a hydraulics system with 1200 kg of lifting power.

Model:	*Nuffield Universal M 4 4WD*
Production period:	*1954–1962*
hp/kW:	*60/43.9*
Cubic capacity:	*3404*
No. produced:	–

Nuffield Universal 4

This vehicle from 1964 has a driver's cab, which was not always the case. Nuffield built this half-frame tractor for 13 years altogether, not least because it was technically very advanced, powerful and robust, and thus not needing to be radically changed in any way. It had a water-cooled, four-cylinder, four-stroke, BMC diesel engine with 45 hp. It weighed in at 2064 kg.

Model:	*Nuffield Universal 4*
Production period:	*1948–1961*
hp/kW:	*45/32.9*
Cubic capacity:	*3400*
No. produced:	–

Orenstein & Koppel/MBA

Whether it was locomotives, dredging machines or mining machines, the Berlin company of Orenstein & Koppel seemed to build everything that was big and heavy and had wheels – so tractors had to come along eventually. The first O&K tractor appeared in 1938. One year later, the Jewish owners were expropriated by the Nazis and the name of the company was changed to MBA, which stood for Maschinenbau- und Bahnbedarf AG. However, since Orenstein & Koppel was already a well-known name both its name and its symbol were used for quite a long time.

Orenstein & Koppel SA 751

This was the company's first tractor and it came in 1938. It was built using the block construction system and its 30 hp engine was very powerful for that time.

This vehicle comes dates from the first year of production and has, as extras, a roof and a windscreen.

Model:	*Orenstein & Koppel SA 751*
Production period:	*1938–1942*
hp/kW:	*30/22*
Cubic capacity:	*3532*
No. produced:	–

MBA SB 751

From 1939, the firm of Orenstein & Koppel was no longer allowed to carry its original name. Both the owners were of Jewish descent and the Nazi regime ordered them to be expropriated and at the same time ordered the changing of the name into Maschinenbau- und Bahnbedarf AG – MBA for short. In the same year, the company brought out this small tractor, the SB 751. It weighed 1279 kg and the engine fitted inside it was a one-cylinder, four-stroke, swirl chamber, diesel unit with 15 hp and, with its three-speed transmission, it could reach a top speed of 5 mph.

Model:	*MBA SB 751*
Production period:	*1939–1942*
hp/kW:	*15/11*
Cubic capacity:	*1766*
No. produced:	–

Orenstein & Koppel/MBA SA 751

The four-speed transmission of this vehicle gave it a maximum speed of 15.8 km/h. The engine came from the company itself and it was the same water-cooled, two-cylinder, four-stroke, diesel unit, Type B 2, which had been used in light, rail tractors. The picture shows a vehicle that was built before 1942.

Model:	*Orenstein & Koppel/ MBA SA 751*
Production period:	*1938–1942*
hp/kW:	*30/22*
Cubic capacity:	*3532*
No. produced:	–

Porsche

Porsche tractors are a sad example of a firm's bad planning and the merciless consequences of this for a large company. Porsche only produced tractors from 1956 to 1963. The firm had taken over the Allgaier tractor manufacturer and wanted to make a bold move into the tractor market. So, a large works was built by the side of Lake Constance that could build 20,000 tractors per year (!). Porsche soon realised that the mechanisation of agriculture was, to a great extent, over and found themselves with a massive over-capacity, which was just costing them money.

Porsche Junior K

Porsche-Diesel-Motorenbau GmbH released this small 14 hp agricultural tractor in 1957. The Junior came in a variety of different versions. The Junior K, for example – here is one from 1958 – differed from the other models in that it was designed as a towing vehicle for cultivating narrow rows. It had a ZF A-4 variable gear transmission, which had six forward and two reverse gears. In addition it had a single-disc, dry clutch from Fichtel & Sachs.

Model:	*Porsche Junior K*
Production period:	*1957–1959*
hp/kW:	*14/10.2*
Cubic capacity:	*822*
No. produced:	*23,000*

Porsche Junior K

The Junior K was a really successful, small tractor. Porsche built 23,000 in two years. Often the normal month's production of 1000 could not satisfy the demand. Its rounded engine cowling with beautiful red paintwork played its part in its great success, not to mention its excellent technology. This pretty, almost as new, Junior K was built in 1959.

Model:	*Porsche Junior K*
Production period:	*1957–1959*
hp/kW:	*14/10.2*
Cubic capacity:	*822*
No. produced:	*23,000*

Porsche Super

This vehicle was sold over a period of three years, from 1957 to 1960. The successor to the P 133, its three-cylinder diesel engine with compressed air cooling had 38 hp. The transmission included six forward and one reverse gear, along with a crawling gear, allowing the vehicle to reach a top speed of 12.4 mph.

Model:	*Porsche Super*
Production period:	*1957–1960*
hp/kW:	*38/27.8*
Cubic capacity:	*2467*
No. produced:	–

Porsche Standard Star

This model came onto the market just four years before Porsche stopped tractor manufacture and it managed to remain in production until the last year. This vehicle could easily be driven and controlled by one person: it was well suited to narrow row cultivation and could be fitted with innumerable extras, like a front power take-off shaft or a front hydraulics system. But it was a good all-rounder and particularly powerful.

Model:	*Porsche Standard Star*
Production period:	*1959–1963*
hp/kW:	*30/22*
Cubic capacity:	*1750*
No. produced:	–

Porsche Standard Type 217

This vehicle was introduced in 1960 and could be used for both towing and general work. It was attractive because of the number of pieces of equipment that could be attached to the vehicle itself. Its 20 hp was mainly suitable for small businesses but also many medium-sized concerns benefited from it. The model was so powerful that it could even pull a two-blade plough. It had an eight-speed transmission with two reverse gears. This example dates from 1960.

Model:	*Porsche Standard Type 217*
Production period:	*1960–1963*
hp/kW:	*20/14*
Cubic capacity:	*1374*
No. produced:	–

Porsche Standard Star Type 238

This vehicle had an adjustable track and so could be used for a multitude of purposes. Its swinging front axle allowed it to cope with heavy loads without any problem and its power lift, jointly produced by Deutz and Porsche, had a lifting power of 925 kg. Extras included a front loader with a lifting power of 400 kg and a canopy for open tractors. This one from 1962, for example, has a Fritzmeier canopy.

Model:	*Porsche Standard Star Type 238*
Production period:	*1962–1963*
hp/kW:	*26/19*
Cubic capacity:	*1750*
No. produced:	–

Porsche Super Export Type 329

This vehicle was also, like so many other Porsche models, a towing tractor and thus suited for narrow row cultivation. It had a T-25 transmission and an air-cooled, three-cylinder, diesel engine with 35 hp, which made it one of the medium-to-large range of tractors. It weighed 1825 kg and had a power take-off shaft as well as a double clutch. Its hydraulics system could already be controlled centrally.

Model:	*Porsche Super Export Type 329*
Production period:	*1962–1963*
hp/kW:	*35/25.6*
Cubic capacity:	*2625*
No. produced:	–

Porsche Master Type 419

This Master Type 419 shines like new with its 50 hp, air-cooled, four-cylinder, diesel engine with radial blower and it was the strongest Porsche model of its time. This powerhouse had a continuously variable transmission, which had eight forward and four reverse gears. With of its power take-off shaft it was able to pull harvesting equipment as well as attached equipment. Extras included an oil-hydraulic clutch, which meant that starting up was a lot easier and even when loaded the tractor did not jerk.

Model:	*Porsche Master Type 419*
Production period:	*1960–1963*
hp/kW:	*50/36.6*
Cubic capacity:	*3289*
No. produced:	–

Renault

Renault was the most important pioneer in the field of tractor building in France. The company had been involved in the building of cars since 1898 and after only 10 years they were experimenting with the building of big tractors and a decade later their first small tractors appeared. They soon became the biggest producer of tractors in France. Production was relocated in 1937 from Billancourt near Paris to Le Mans and the firm was nationalised in 1945. At the end of the 1950s, Renault decided to offer both air and water-cooled engines rather than restrict themselves to one of these options. This meant that they could satisfy supporters of both types and keep them as customers. They mostly used their own engines but they also used others from BMW, Perkins and Peugeot.

Renault R 3042

Renault was nationalised at the end of World War II and began to produce this vehicle from 1948. It was a massive-looking tractor with a four-cylinder 30 hp Otto engine. The vehicle weighed 1825 kg and could use either petrol or paraffin. With the help of its four-speed transmission, it could reach speeds of up to 13.4 mph. This example is now to be found in Switzerland and dates from 1949.

Model:	*Renault R 3042*
Production period:	*1948–1952*
hp/kW:	*30/22*
Cubic capacity:	*2384*
No. produced:	–

Renault Super 3 D

The models in the Super series were fitted with either water or air-cooled engines. This vehicle had a two-cylinder, four-stroke, 26 hp diesel unit with direct injection. Most of the engines had been developed in cooperation with the MWM engine manufacturer. The Renault Super 3 D boasted a gearbox with ten forward and two reverse gears, which gave the tractor speeds between 0.5 and 13.2 mph. It weighed 1580 kg. Here is one from 1960, appropriately restored.

Model:	*Renault Super 3 D*
Production period:	*1959–1965*
hp/kW:	*26/19*
Cubic capacity:	*1810*
No. produced:	–

Renault V 71

The Renault V 71, built using the half-frame construction method, came onto the market in 1958. This powerful vehicle – here is one from 1861 with shell mudguards – had a three-cylinder Perkins P.3.144 30 hp diesel engine with water-cooling and a transmission with 12 forward and 3 reverse gears. It could work between speeds of 0.4 and 13 mph but obviously its top speed was only possible on the road. Because of this great range of speeds, this vehicle was suitable for either maintenance or sowing work.

Model:	*Renault V 71*
Production period:	*1958–1965*
hp/kW:	*30/22*
Cubic capacity:	*2365*
No. produced:	–

Renault N 72

This vehicle, built using the block construction method, first appeared in 1960 and was built over a period of six years. The engine was a two-cylinder, four-stroke, MWM AKD 112 Z 24 hp diesel unit with air-cooling. Weighing 1580 kg, it was regarded as a medium-size tractor. It had an enormous, three-point hydraulics system along with a power take-off shaft and its ten-speed transmission with two reverse gears gave it a maximum speed of 13.2 mph (its slowest speed was 0.5 mph). Here is one from 1964.

Model:	*Renault N 72*
Production period:	*1960–1966*
hp/kW:	*24/17.6*
Cubic capacity:	*1810*
No. produced:	–

Renault Super 5 D

This was a narrow-gauge tractor, used particularly for the cultivation of fruit and, more often in France, for wine-growing. Its ten-speed transmission gave it a top speed of 13.2 mph. It weighed 1585 kg and was built with a half-frame design. It had a Renault three-cylinder 34 hp diesel engine with water-cooling.

Model:	*Renault Super 5 D*
Production period:	*1962–1966*
hp/kW:	*34/24.9*
Cubic capacity:	*2263*
No. produced:	–

Renault Super 3 D

This example comes from 1964 – the year after Renault began cooperation with the German company of Mannesmann, which had ceased its own production of tractors because of market forces. This vehicle with its two-cylinder MWM 26 hp diesel engine was classed as being in the medium range of tractors. Correspondingly, its target group was mainly smaller and medium-sized businesses.

Model:	*Renault Super 3 D*
Production period:	*1963–1966*
hp/kW:	*26/19*
Cubic capacity:	*1810*
No. produced:	–

Renault Super 5 D

Bulky, angular, powerful. All these adjectives strike the observer on viewing this vehicle for the first time. It was introduced in 1962 and had a three-cylinder Renault diesel engine with water-cooling, providing 34 hp. At 1585 kg it belonged to the medium range of tractors. Its transmission had ten forward and two reverse gears. Here is an example from 1962.

Model:	*Renault Super 5 D*
Production period:	*1962–1966*
hp/kW:	*34/24.9*
Cubic capacity:	*2263*
No. produced:	–

Renault narrow-gauge

This narrow-gauge tractor was one of the first that Renault produced with four-wheel drive. This was made possible through cooperation with the Italian tractor manufacturer Carraro. It was a medium-size tractor with a two-cylinder 32 hp diesel engine. This beautifully restored example comes from 1974 and has a safety roll bar as well as a front cable winch, both of which were extras.

Model:	*Renault 4WD narrow-gauge tractor*
Production period:	*1970–1977*
hp/kW:	*32/23.4*
Cubic capacity:	*1905*
No. produced:	–

SAME

The Società Anonima Motori Endothermic, better known as SAME, was founded in the 1942. The tractors produced by this Italian manufacturer from 1951 were all four-wheel drive vehicles with air-cooled engines, but there was a wide range with varying levels of performance. SAME kept well ahead technically in the following years with the hydraulic depth adjustment system in 1959 and the Centauro tractors with four-wheel or rear-wheel drive.

SAME 240 DT M

In 1958, SAME brought out this four-wheel-drive tractor and it was the first of many four-wheel-drive vehicles that made the firm well known way beyond the borders of Italy. This vehicle had a two-cylinder diesel engine producing a powerful 42 hp, achieved at 2000 rpm. It was also available with rear-wheel drive and weighed 1860 kg. This example was built in 1958.

Model:	*SAME 240 DT M*
Production period:	*1958–1962*
hp/kW:	*42/30.7*
Cubic capacity:	*2492*
No. produced:	–

SAME Sametto

It was only from 1948 that SAME began to produce tractors in any quantity. From the early 1950s they had air-cooled, one or two-stroke, diesel engines. In 1957, SAME brought out the 18 hp Sametto, which had a one-cylinder diesel unit. It was aimed at small concerns and had a five-speed transmission. This beautifully restored example comes from the second year of production.

Model:	*SAME Sametto*
Production period:	*1957–1960*
hp/kW:	*18/13.2*
Cubic capacity:	*1245*
No. produced:	-

SAME Centauro 60

Between 1966 and 1975, this vehicle was an integral part of the marketing strategy of SAME. It was a powerful tractor with an air-cooled, four-cylinder, diesel engine, giving it 60 hp. The engine unit had been developed and built by SAME, as had the eight-speed transmission with reverse gears, and it gave speeds of between 0.1 and 16.8 mph. This beautifully restored four-wheel drive vehicle with a safety cage is from 1970 and weighs 2570 kg without attachments. Its back tyres are of size 11-36 and those at the front have size 10-24.

Model:	*SAME Centauro 60*
Production period:	*1966–1975*
hp/kW:	*60/43.9*
Cubic capacity:	*3620*
No. produced:	–

Schlüter

Anton Schlüter founded his engine works in Freising, near Munich, in 1898. However, it was only in 1937 that he began the manufacture of tractors in order to enter what was a lucrative market. He succeeded with the 25 hp DZM 25, which was replaced by the GZA 25 in 1942. Schlüter showed that he had his finger on the pulse of the times and developed a gas tractor just as the ban on diesel tractors was imposed. After the war, when it once again became possible to use diesel, Schlüter was again on the ball with the DS 25. This vehicle had a lot of applications and was built so solidly that it was still in use decades later. Schlüter always offered a wide range of tractors and was able to defy the competition, even though his market share declined. In the 1970s his company developed bigger and better-performing tractors, still using the slogan 'As much power as you need'. However, these giants were only built in small numbers and in fact the Schlüter Profi Trac 5000 TVL was only built once.

Schlüter GZA 25

Even the Bavarian company of Schlüter was forced to build gas-powered tractors from 1942. So, the GZA 25 was designed and production was begun at once. Its engine had a cubic capacity of almost 4000 cc. and was stated as having 25 hp, although it was actually 28 hp. The Imbert gas generator was placed in front of the front axle. Its Prometheus four-speed transmission allowed it speeds of up to 12.4 mph.

Model:	*Schlüter GZA 25 Generator tractor*
Production period:	*1942–1947*
hp/kW:	*25/18.3*
Cubic capacity:	*3982*
No. produced:	*630*

Schlüter DS 25 B

The Schlüter tractors were well known for the thickness of their steel plates, which ensured that the tractor would last. Their engines were just as robust and so the DS 25 B was fitted with the company's own unit – a two-cylinder, four-stroke, ED 25 diesel engine, which had been built according to the patented swirl chamber process, which meant it averaged 25 hp over a period of time. The unit's top performance was 28 hp. This example from 1953 has a windscreen.

Model:	*Schlüter DS 25 B*
Production period:	*1948–1954*
hp/kW:	*25/18.3*
Cubic capacity:	*3116*
No. produced:	*4085*

Schlüter DS 15 H

This powerful little tractor, produced from 1951, had a one-cylinder, four-stroke, 15 hp diesel engine with water-cooling. This engine unit was also built on the swirl chamber process and when starting up it worked similarly to those engines with direct injection, making it actually very easy to start, whether it was warm or cold. The tractor was built with the block construction design system, and it originally came with either four- or five-speed transmission, allowing speeds of between 1.6 and 11.2 mph.

Model:	*Schlüter DS 15 H*
Production period:	*1950–1954*
hp/kW:	*15/11*
Cubic capacity:	*1558*
No. produced:	*4212*

Schlüter DS 15 F

A new version of the DS 15 in 1951 produced an extra 2 hp. The tractor with this engine was sold under the name DS 15 F – here is a restored example from 1952. The tractor now had a five-speed ZF transmission or, alternatively, a Hurth unit, which allowed a slightly higher speed.

Model:	*Schlüter DS 15 F*
Production period:	*1951–1954*
hp/kW:	*17/12.4*
Cubic capacity:	*1558*
No. produced:	*4212*

Schlüter AS 18

This vehicle was introduced in 1954 and had a one-cylinder, four-stroke, ASM 18 diesel engine, producing 18 hp and made by the company itself. Like most of the Schlüter engine units, it worked on the swirl chamber combustion process, which made it very easy to start. This example, with a side mower, comes from the first year of production.

Model:	*Schlüter AS 18*
Production period:	*1954–1956*
hp/kW:	*18/13.2*
Cubic capacity:	*1610*
No. produced:	*1600*

Schlüter AS 45

Towing power, high performance and durability were only some of the features of this Schlüter powerhouse. Two transmissions from different manufacturers were used in this vehicle, each with five switching stages. The tractor's power came from a three-cylinder, four-stroke, diesel engine. Extras included a power take-off shaft with a double clutch. Here is one from 1951.

Model:	*Schlüter AS 45*
Production period:	*1954–1958*
hp/kW:	*45/33*
Cubic capacity:	*4830*
No. produced:	*109*

Schlüter ASL 160

This new design of small tractor was brought out by Schlüter in 1957, and it was aimed naturally, first and foremost, at small businesses but also at medium-sized agricultural concerns. It had an air-cooled engine unit with 16 hp and the Hurth G 85 transmission. If required there was also available a power take-off shaft with a double clutch.

Model:	*Schlüter ASL 160*
Production period:	*1957–1958*
hp/kW:	*16/11.7*
Cubic capacity:	*1506*
No. produced:	*346*

Schlüter AS 241 A

This vehicle came onto the market in 1958 and yet its production was stopped in the same year and only 171 were actually built. It had 25 hp and was the successor to the AS 240, now with a direct injection engine. The engine capacity had also been increased.

Model:	*Schlüter AS 241 A*
Production period:	*1958*
hp/kW:	*24/17.6*
Cubic capacity:	*2512*
No. produced:	*171*

Schlüter S 25

In 1959, Schlüter brought out this new 25 hp tractor with its two-cylinder, ASM 259 diesel engine, which was made by the company. Its standard equipment included a transmission power take-off shaft and a six-speed transmission from Hurth. The customer had a choice of paintwork and, as extras, a belt pulley, engine power take-off shaft and mower attachment.

Model:	*Schlüter S 25*
Production period:	*1959–1961*
hp/kW:	*25/18.3*
Cubic capacity:	*2512*
No. produced:	*860*

Schlüter S 45

Between 1959 and 1961, 343 of these vehicles were built. This vehicle had 45 hp and with its water-cooled, three-cylinder, diesel engine, which was the company's own, it was one of Schlüter's biggest models. Its six-speed transmission with reverse gear gave it a top speed of 12.4 mph. Also available was a super crawling gear, which could curb the speed of the vehicle to 0.6 mph. Extras included power take-off shaft, belt pulley, front loader, power lift and many others.

Model:	*Schlüter S 45*
Production period:	*1959–1961*
hp/kW:	*45/32.9*
Cubic capacity:	*4830*
No. produced:	*343*

Schlüter S 50

This heavy tractor replaced the S 45 in 1961. It was 5 hp more powerful than its predecessor. Using its claw-type gear change – as standard it had eight forward and four reverse gears, plus a fast gear – this high-quality tractor could attain a maximum speed of 18.6 mph and so was suitable for use on the roads. It weighed 2700 kg and this helped it to tow harvesting equipment with its power take-off shaft without any problem at all.

Model:	*Schlüter S 50*
Production period:	*1961–1963*
hp/kW:	*50/36.6*
Cubic capacity:	*4830*
No. produced:	*447*

Schlüter S 450

From 1960, Schlüter began to concentrate on the production of tractors with a high engine performance in order to continue to be competitive. Before this time, many of the Schlüter tractors across all their ranges had only been selling rather sluggishly. However, by concentrating on the production of large tractors, this situation changed somewhat. From 1962 onwards, the S 450 4WD with its 42 hp engine managed 2503 sales.

Model:	*Schlüter S 450 4WD*
Production period:	*1962–1966*
hp/kW:	*42/30.7*
Cubic capacity:	*3245*
No. produced:	*2503 (all versions)*

Schlüter Super 650 V

It was in 1966 that Schlüter tractors with the designation 'Super' as part of the model name came onto the market. At first, there were six tractors in this series with between 38 and 130 hp. The Super 650 V was somewhere in the middle of this range with its 65 hp and six-cylinder diesel engine made by the company itself. Along with the four-wheel drive version of this vehicle, there was also a standard version with rear-wheel drive. It had an transmission unit with eight forward and four reverse gears.

Model:	*Schlüter Super 650 V 4WD*
Production period:	*1966–1971*
hp/kW:	*65/47.6*
Cubic capacity:	*5892*
No. produced:	*661 (all models)*

Schlüter Super 750 V

This vehicle had 75 hp and was introduced in 1966 with a fully synchronised, 12-gear transmission, including 6 reverse gears. If required, this unit could be fitted with crawler gears. At 4030 kg it was an exceptionally powerful vehicle for both towing and general performance, and fully satisfied the needs of large businesses. This example with four-wheel drive comes from 1965.

Model:	*Schlüter Super 750 V 4WD*
Production period:	*1966–1971*
hp/kW:	*75/54.9*
Cubic capacity:	*6492*
No. produced:	*490 (all versions)*

Schlüter Super 1250 V

With its 115 hp, this vehicle was a mighty tractor even for its time. It had a six-cylinder, Schlüter engine unit and a 12-gear transmission, which was synchronised with the steering. This example from 1971 has a driver's cab with all-round vision with its entrance at the side. The hydraulic power steering was a great boon for the driver since the tractor weighed 4640 kg.

Model:	*Schlüter Super 1250 V 4WD*
Production period:	*1968–1973*
hp/kW:	*115/84.2*
Cubic capacity:	*7128*
No. produced:	*640*

Schlüter Super 850 V

Schlüter brought out this vehicle in 1968. Its six-cylinder Schlüter diesel engine produced 10 hp more than the 750 V. The synchronised transmission with 12 forward and 6 reverse gears could also have crawling, super crawling and fast gears if required. The latter gave it speeds of between 0.2 and 17 mph. This example from 1970 has four-wheel drive and a cab with all-round vision.

Model:	*Schlüter Super 850 V 4WD*
Production period:	*1968–1971*
hp/kW:	*85/62.2*
Cubic capacity:	*6618*
No. produced:	*250 (all versions)*

Schlüter Profi Trac 3000 TVL

At the beginning of the 1970s, Schlüter was concentrating totally on tractors in the upper performance ranges. This vehicle came onto the market in 1975 with a six-cylinder turbo diesel engine from MAN producing 280 hp. There was little to compare it with anywhere on the tractor market – the top models of most of the other tractor producers could only offer half the performance of this Profi Trac. A total of 13 of this superlative tractor model were produced – 12 of these were exported to Yugoslavia and one, this example from 1977, went to Belgium.

Model:	*Schlüter Profi Trac 3000 TVL*
Production period:	*1975–1977*
hp/kW:	*280–300/205–219.6*
Cubic capacity:	*11.045*
No. produced:	*13*

Schlüter Profi Trac 5000 TVL

Schlüter only produced one of these 5000 TVLs. This absolute giant of a tractor weighed 18,000 kg and had a water-cooled, MAN V12 direct injection diesel engine with 500 hp and was thus equipped for all possible areas of use. It was originally built for export to Yugoslavia but production ceased because the political situation in the Balkan country changed and the government showed no further interest in this giant tractor. Its transmission had 8 forwards and one reverse gear and a top speed of 29.8 km/h. It is an impressive example of the possibilities in tractor building, even in 1978.

Model:	*Schlüter Profi Trac 5000 TVL*
Production period:	*1978*
hp/kW:	*500/366*
Cubic capacity:	*29,911*
No. produced:	*1*

Steyr

Austria's most important producer of tractors only started making the vehicles after World War II. The company found it necessary to build an engine that could be used in tractors as well as lorries. The Steyr 180 came onto the market in 1947. It was a no-frills, reliable and solid tractor, which formed the basis of successful tractor production in the following years. Steyr offered tractors at all performance levels and also built narrow-gauge tractors.

Steyr 180

The first tractor model to come onto the market in Austria after World War II was the Steyr 180. It had a water-cooled, 26 hp, two-cylinder, four-stroke, longitudinally mounted front chamber diesel engine and it quickly became a sales hit. In its production period from 1947 to 1953 (in 1953 the engine performance was improved), 25,000 were built. This tractor – here is one from 1950 – could reach speeds of up to 15.2 mph with its five-speed and reverse gear transmission system.

Model:	*Steyr 180*
Production period:	*1947–1950*
hp/kW:	*26/19*
Cubic capacity:	*2661*
No. produced:	*in total 25,302*

Steyr 80

On the assumption that a tractor with low performance would drive forward the process of mechanisation for Austrian farmers, Steyr offered, in 1949, the Type 80. It was certainly a small tractor, with a one-cylinder 13 hp diesel engine, and around 45,000 were built. It had a four-speed transmission with reverse, which, if required, could be fitted with an additional switching stage.

Model:	*Steyr 80*
Production period:	*1949–1964*
hp/kW:	*13/9.5*
Cubic capacity:	*1330*
No. produced:	*in total 45,068*

Steyr 84 a

This vehicle was one of the firm's export models and was a slight variation from the standard Steyr 84. This small tractor, which was part of the company's strategy for eight years, had 15 hp and was fitted with larger tyres and a more modern bonnet shape. Its ground clearance was larger than that of the Steyr 80, thus making it a vehicle especially suited to maintenance and sowing work. Small concerns also found it suitable for many other kinds of work. Here is one from 1960.

Model:	*Steyr 84 a*
Production period:	*1956–1964*
hp/kW:	*15/11*
Cubic capacity:	*1330*
No. produced:	*19,796*

Steyr 80 a

This vehicle was introduced in 1950 and was a variant of the Steyr 80. It had larger back wheels, giving it greater ground clearance, thus making it useful for maintenance and root crop work. It was also different in having 2 hp greater performance and more pulling power. However, its use was limited on uneven terrain. Here is one from 1950.

Model:	*Steyr 80 a*
Production period:	*1950–1956*
hp/kW:	*15/11*
Cubic capacity:	*1330*
No. produced:	*14,357*

Steyr 185

This vehicle had a three-cylinder 45 hp diesel engine with water-cooling. It was thus quite powerful for the middle of the 1950s. Many farmers in Austria had been waiting for such a powerhouse, and this was reflected in the sales figures. The 185 was almost always ordered with a power take-off shaft because it was often used for work with harvesting machines. This example is from the first year of production and is fitted with a roof and a windscreen.

Model:	*Steyr 185*
Production period:	*1955–1958*
hp/kW:	*45/32.9*
Cubic capacity:	*3991*
No. produced:	*1006*

Steyr 188

Amongst the features of this vehicle was a transmission with eight forward and six reverse gears. As standard, it had a built-in hydraulics system and also a two-cylinder, Steyr, four-stroke, WD 209 diesel unit with 28 hp. The pulling power of the tractor increased with the tyre pressure amplifier integrated into the hydraulics. This tractor was in the medium range, weighed 1390 kg and was built in the wasp-waist design.

Model:	*Steyr 188*
Production period:	*1960–1966*
hp/kW:	*28/20.5*
Cubic capacity:	*1991*
No. produced:	*23,223*

Steyr 190 s

The small 's' in the designation of this tractor indicated that it was narrow gauge. There was also a standard version Steyr 190. The narrow-gauge vehicle had a water-cooled, three-cylinder, WD 306 a diesel engine, which was the company's own design, and either an 8/6 or a 12/6 transmission with regulated hydraulics. This example looks almost new, although it actually left the factory in 1966.

Model:	*Steyr 190 s*
Production period:	*1965–1968*
hp/kW:	*36/26.4*
Cubic capacity:	*2260*
No. produced:	*377*

Steyr 430 n

This vehicle belonged to the 30 Series and came with a choice of transmission: 8 or 16 forward and 6 or 12 reverse switching stages. It is immediately obvious that this vehicle – here is one from 1970 – had a very small ground clearance, making it a very safe vehicle particularly suited to mountainous terrain. However, maintenance work was not as easy because of this.

Model:	*Steyr 430 n*
Production period:	*1967–1970*
hp/kW:	*32/23.4*
Cubic capacity:	*1991*
No. produced:	–

Ursus

The Ursus company was founded in Warsaw, in 1893 and is the tractor pioneer of Poland. The company built its first tractor, under licence, after World War I but the company was nationalised in the 1930s and other types of vehicle were produced. It was only after World War II, when Poland was starving, that tractors were produced in quantity at the Ursus Works. The Lanz-Ackerluft-Bulldog D 9506 was copied because high-performing vehicles were needed for the new, large-area fields on the now nationalised farms. This was a practical policy, because they had neither the time nor the money to develop new models themselves.

Ursus C 45

The Ursus Works had been largely destroyed during World War II but its rebirth began with the production of the Lanz-Ackerluft-Bulldog D 9506, for which no licence charges had to be paid. Its new name, the Ursus C 45, proved to be quite appropriate – 'ursus' is Latin for 'bear' and this vehicle was the real bear of its time with its powerful 45 hp. This power was really necessary because the newly nationalised farms had huge fields that needed to be cultivated and this could only be achieved by tractors with a certain level of performance. This example comes from 1954.

Model:	*Ursus C 45*
Production period:	*1947–1955*
hp/kW:	*45/32.9*
Cubic capacity:	*10,338*
No. produced:	*in total 60,000*

Ursus C 45

Since the C 45 was one of the few tractors produced in Poland after the war, it was no wonder that vast numbers were made. During the eight years of its manufacture, 60,000 were produced. Just like its German counterpart, the Lanz D 9506, it was a robust, powerful and yet comparatively comfortable vehicle, which did not need a lot of maintenance; it was the latter feature that was most important, bearing in mind the lack of parts often found in this planned economy.

Model:	*Ursus C 45*
Production period:	*1947–1955*
hp/kW:	*45/32.9*
Cubic capacity:	*10,338*
No. produced:	*in total 60,000*

Ursus C 45

This vehicle resembled the Lanz-Bulldog 9506 in every detail. Even from a technical point of view it was the same. It had, just like the model it was based on, a hot bulb engine and a transmission with six forward and two reverse stages, giving it speeds between 2.1 and 10.4 mph. This wonderfully restored Ursus from 1949 has the distinctive double cone exhaust system, typical of this vehicle, and has additional features of a windscreen and rear wheel mudguards.

Model:	*Ursus C 45*
Production period:	*1947–1955*
hp/kW:	*45/32.9*
Cubic capacity:	*10,338*
No. produced:	*in total 60,000*

UTB

Uzina Tractorul Brasov, UTB for short, is a Romanian tractor producer founded in Brasov in 1946. It was originally an armaments factory. Right from the start UTB aimed not only to provide tractors for its own agriculture, but also, if possible, to sell to foreign countries in order to bring in foreign currency. This worked because the UTB tractors were cheaper than those of their Western competitors and were also very resilient and functional. From the 1960s, some of the UTB models were fitted with Fiat engines and, a few years later, there came a licence agreement with the Italian tractor producer.

UTB Universal 530

From the early 1960s, UTB, the biggest tractor producer in Romania, put engine units from the car manufacturers Fiat into their tractors. The Universal 530 looked exceptionally bulky with its three-cylinder, 55 hp Fiat diesel engine with water-cooling. It weighed 2531 kg and its eight-speed transmission covered speeds between 1.4 and 13.9 mph.

Model:	*UTB Universal 530*
Production period:	*1963–1970*
hp/kW:	*55/40.3*
Cubic capacity:	*2574*
No. produced:	–

UTB Universal 600

This vehicle was introduced in 1964 and was even more powerful than the 530, having a its four-cylinder, 60 hp Fiat diesel engine with water-cooling. As standard, this powerful vehicle had both engine and transmission power take-off shaft, three-point hydraulics system and power steering. With its 12-speed transmission the tractor could manage speeds of between 0.8 and 15.6 mph. This example was built in 1968.

Model:	*UTB Universal 600*
Production period:	*1964–1972*
hp/kW:	*60/43.9*
Cubic capacity:	*3120*
No. produced:	–

UTB Universal 650

In 1963, UTB brought a further tractor onto the market. This was their top model: the UTB Universal 650 with 65 hp. Instead of a Fiat engine, it had a four-cylinder, direct injection diesel engine with water-cooling of the company's own make. It weighed 3350 kg and had a ten-speed transmission with two reverse gears, giving speeds between 1.6 and 10.5 mph. This made it a very powerful tractor, and it also proved to be very robust and durable. One feature of this tractor was compressed air brakes for use when attaching equipment.

Model:	*UTB Universal 650*
Production period:	*1963–1972*
hp/kW:	*65/47.6*
Cubic capacity:	*4760*
No. produced:	–

Vierzon

Société Française was the largest producer of agricultural machinery in France in the first third of the twentieth century, and so it made sense for them to get involved in the new business of tractors. Accordingly, in 1931 the Vierzon H 0 was introduced, a tractor with a hot bulb engine named after the site of the factory in Vierzon. Even after World War II, SFV continued to produce hot bulb engined tractors because French farmers liked to buy them. Towards the end of the 1950s, there were no purchasers for this ageing technology and even the sale of the company to Case did not bring the hoped-for turnaround in fortunes, so the brand name of Vierzon disappeared from the tractor market.

Vierzon H 1

Amongst its first tractors was the 1934 Vierzon H 1, a model with a 38 hp hot bulb engine. This vehicle – here is one from the second year of production – had a three-speed gearbox. The predecessor of the H 1 had been the H 0, built in 1931.

Model:	*Vierzon H 1*
Production period:	*1934–1942*
hp/kW:	*38/27.8*
Cubic capacity:	*10,335*
No. produced:	–

Vierzon FV 1

SFV's first models after the war used one-cylinder hot bulb engines, like the Lanz tractors from before the war that they were modelled on. But at least the design of the tractor was more modern. The FV 1 – here is an example with pneumatic tyres (iron wheels were also available) – had a 45 hp engine unit.

Model:	*Vierzon FV 1*
Production period:	*1947–1950*
hp/kW:	*45/32.9*
Cubic capacity:	*12,760*
No. produced:	–

Vierzon 302

This vehicle first came onto the market in 1950 and had speeds between 2.2 and 12.4 mph. It had a five-speed transmission and a 30 hp one-cylinder, two-stroke, hot bulb diesel engine, which gave its top performance at 800 rpm. This example from 1951 with pneumatic tyres was built at the works at Le Creusot, just like the other Type 302 tractors.

Model:	*Vierzon 302*
Production period:	*1950–1956*
hp/kW:	*30/22*
Cubic capacity:	*5346*
No. produced:	–

Vierzon 201

This small tractor was built from 1953 and had a water-cooled, four-cylinder, half-diesel engine with 18 hp. The bodywork had a modern design, particularly noticeable in the rounded shape of the engine casing. It weighed 1100 kg and, as standard, had an electric starter motor and a hydraulic power lift. It was started up with petrol but when the engine was warm, the driver had to switch over to diesel. This example left the factory in 1956.

Model:	*Vierzon 201*
Production period:	*1953–1959*
hp/kW:	*18/13.2*
Cubic capacity:	*3209*
No. produced:	–

Vierzon 551

Big, bulky and powerful. These were the appropriate adjectives to describe the features of the Vierzon 551, which was first produced in 1951. It was the most powerful of the hot bulb engine tractors from the French manufacturer SFV. Its engine had 52 hp, which was only exceeded at that time by another of the company's models, the Vierzon 552, although only 33 of these were ever produced. This Vierzon 551 was made in 1951 and has, like the other models of this type, a five-speed transmission with a reverse gear.

Model:	*Vierzon 551*
Production period:	*1951–1956*
hp/kW:	*52/38.1*
Cubic capacity:	*12,760*
No. produced:	–

Zetor

After World War II, Czechoslovakia was in desperate need of tractors to cultivate its fields and so the government ordered the transformation of an armaments factory into a tractor works. This is how Zetor came into being. Although the medium-sized Zetor 25 was actually designed for the country's own agriculture, it became an export sales success, since it was reliable, functional and good value for money. In the following decades, Zetor managed to keep up with the competition. In 1960, the first four-cylinder diesel came onto the market and, ten years later, the first Zetor four-wheel drive appeared.

Zetor 25

Zetor's Type 25 tractor was ready shortly after World War II. It was of the block construction design and had a water-cooled, two-cylinder, diesel engine with 26 hp. Not only did it sell well at home, it also turned into an export success. This was no wonder, since it was a very reasonably priced and solid vehicle, which could be used for almost any purpose. This beautifully restored Zetor 25 was built in 1955.

Model:	*Zetor 25*
Production period:	*1946–1955*
hp/kW:	*26/19*
Cubic capacity:	*2080*
No. produced:	*158,000*

Zetor 4511

The Type 4511 was Zetor's best-performing tractor at the end of the 1950s. It had 45 hp and a manual transmission with ten forward and two reverse gears giving it a speed of up to 15.9 mph. The first two forward stages of the transmission were crawling gears, which meant that it was very well suited to maintenance and sowing work. It weighed 2480 kg and sold particularly well abroad.

Model:	*Zetor 4511*
Production period:	*1959–1968*
hp/kW:	*45/32.9*
Cubic capacity:	*3118*
No. produced:	–

Zetor Super 50

This vehicle was produced from 1955 and at first was equipped with a four-cylinder Zetor diesel engine with 42 hp, but this was increased later to 50 hp at 1500 rpm. It had a top speed of 14.9 mph, making it very suitable for the roads. As in this example from 1959, for road use it had a fixed driver's cab and compressed air brakes for any attached equipment. The lowest speed that the five-speed transmission allowed was 2.4 mph and it weighed 2550 kg when empty.

Model:	*Zetor Super 50*
Production period:	*1955–1962*
hp/kW:	*42–50/30.7–36.6*
Cubic capacity:	*4160*
No. produced:	–

Zetor 50 Super

This vehicle was released in 1960 with an innovative four-cylinder diesel engine. This large cubic capacity engine unit had 50 hp and a maximum of 1500 rpm. It also had an eight-speed transmission with two reverse gears. This lovely tractor with a fixed driver's cab comes from 1967.

Model:	*Zetor 50 Super*
Production period:	*1960–1968*
hp/kW:	*50/36.6*
Cubic capacity:	*4160*
No. produced:	–

Zetor 5748

Its compact outward appearance gave only a hint of the power of this four-wheel-drive vehicle. It had Zetor's own water-cooled, four-cylinder diesel engine with direct injection, which provided 63 hp and a maximum of 2200 rpm. It was one of the first tractors produced by Zetor to have four-wheel drive. The transmission of this vehicle – here is one from 1972 – had 20 switching stages (including intermediate gears) and could manage speeds between 0.68 and 15.1 mph.

Model:	*Zetor 5748 4WD*
Production period:	*1971–1984*
hp/kW:	*63/46.1*
Cubic capacity:	*3456*
No. produced:	–

Zettelmeyer

Steamrollers and motor road rollers were the precursors to the Zettelmeyer tractors. Hubert Zettelmeyer had founded his engineering works in 1902 near to Trier in Germany and in 1935 the company began tractor production. Nothing experimental was attempted – simply the solid and conventional Model Z 1, a reliable farm tractor with 22 hp.

Zettelmeyer Z 1

This first vehicle from Zettelmeyer was built between 1935 and 1942 and had 22 hp. It was constructed using the block construction design principle. Its transmission had four gears and it came with power take-off shaft, belt pulley, mower and pneumatic tyres.

Model:	*Zettelmeyer Z 1*
Production period:	*1935–1942*
hp/kW:	*22/16.1*
Cubic capacity:	*2198*
No. produced:	–

Zettelmeyer Z 2

This was Zettelmeyer's second tractor to come onto the market – in 1936. As with the Z 1, it had an engine and transmission made by the company, but this was more of a road vehicle, having a top speed of 12.4 mph. The customer could choose between single or double tyres on the back wheels. It had an electric lighting system as standard – obviously important for when it was on the road. This example dates from 1936.

Model:	*Zettelmeyer Z 2*
Production period:	*1936–1942*
hp/kW:	*20/14.6*
Cubic capacity:	*2028*
No. produced:	–

Zettelmeyer Z 2

It was only the special edition of this vehicle that had, like its predecessor the Z 1, a closed driver's cab, but customers often ordered it anyway since the vehicle was mainly for use on the roads. However, it was also used quite often in forestry and for this purpose, a cable winch was one of the extras provided. Its mudguards over the front and back wheels were connected to each other by the running boards.

Model:	*Zettelmeyer Z 2*
Production period:	*1936–1942*
hp/kW:	*20/14.6*
Cubic capacity:	*2028*
No. produced:	–

Index

Advance-Rumely Oil Pull 12-20 15
Advance-Rumely Oil Pull G 20-40 14
Advance-Rumely Oil Pull Type H 1918 15
Agrotron 200 MK 3 59
Allgaier A 22 17
Allgaier AP 17 16
Allgaier R 22 17
Allis-Chalmers B 19
Allis-Chalmers WC 18
Allis-Chalmers WD 19
Allis-Chalmers WF 19

Bautz AL 240 21
Bautz AS 120 20
Bautz AS 122 B 21
Belarus DT 20 22
Belarus MTS 5 MC 23
Belarus MTZ 5 MS 23
Belarus T 40 23
BM 350/Volvo T 350 25
BM 350/Volvo T 350 Boxer 26
BM Viktor/Volvo T 230 25
BM/Volvo T 350 26
Bolinder-Munktell-Volvo T 21 24
Bührer BD 4 30
Bührer BG 4 29
Bührer GM 29 Super Six 31
Bührer Spezial TO 4 29
Bührer Standard MS 12 31
Bührer Type C 28
Bührer UM 4 30

Case 10-18 Crossmotor 32
Case 15-27 Crossmotor 33
Case C 28 33
Case IH 1455 XL 37
Case IH 5140 Maxxum 37
Case IH 533 36
Case IH 7120 Magnum 38
Case IH 840 36
Case IH CVX 1170 39
Case IH JX 1070 C 38
Case IH JX 85 39
Case IH MXU 135 38
Case IH STX 375 Quadtrac 39
Case Model DC 34
Case Model VA 34
Challenger MT 745 40
Challenger MT 755 41
Challenger MT 865 41

David Brown 50 D 42
David Brown 996 43
David Brown Cropmaster 25 C 42
David Brown Cropmaster 25 D 43
David Brown Type 750 43
Deering F 12 FG 141
Deutz D 15 53
Deutz D 15 Plantage 54
Deutz D 25 54
Deutz D 25.1 S 53
Deutz D 30 55
Deutz D 30 S 56
Deutz D 40 L 56
Deutz D 40 UF 54
Deutz D 4006 57
Deutz D 5206 57
Deutz D 5505 55
Deutz D 8005 56
Deutz F 1 L 514/50 47
Deutz F 1 L 514/51 49
Deutz F 1 L 612/4 52
Deutz F 1 L 712 52
Deutz F 1 M 414 45
Deutz F 1 M 414/46 48
Deutz F 2 L 514/50 50
Deutz F 2 M 315 ..... 45, 46
Deutz F 2 M 417 44
Deutz F 3 L 514/51 50
Deutz F 3 L 514/6 51
Deutz F 3 M 317 47
Deutz F 4 L 514/4 51
Deutz F2 L 612/4 52
Deutz Intrac 2002 58
DX 120 58
DX 3.50 F 59

Eicher 2100 4WD 69
Eicher 3014 Wotan II 4WD 68
Eicher 3105 69
Eicher E 17 64
Eicher EA 400 Königstiger 4WD 67
Eicher ED 16 60
Eicher ED 22 62
Eicher ED 22/I 61
Eicher ED 25/II 61
Eicher ED 50/I 65
Eicher EKL 15/II 62
Eicher EM 100 Leopard 66
Eicher EM 200 Tiger 66
Eicher EM 300 Königstiger 67
Eicher EM 500 Mammut I 67
Eicher ES 202 Puma I 68
Eicher L 22/II 63
Eicher L 28 63
Eicher L 40/I 64
Eicher L 60 65
Eicher LH 12 63

Fahr D 12 N 71
Fahr D 17 N 72
Fahr D 177 S 73
Fahr D 25 N 72
Fahr D 88 73
Fahr D 90 H 72
Fahr F 22 70
Fahr Generator Tractor HG 25 71
Farmall Cub 142
Farmall D 214 147
Farmall D 320 146
Farmall D 324 147
Farmall M 143
Farmall Regular Tractor 139
Farmall Super A 143
Farmall Super BMD 143
Farmall-Diesel DED 3 146
Farmall-Diesel DGD 4 ..... 145, 146
Farmall-Diesel DLD 2 145
Fendt Dieselross F 12 HL 76
Fendt Dieselross F 15 G 6 76
Fendt Dieselross F 15 H 75
Fendt Dieselross F 20 76
Fendt Dieselross F 24 L 77
Fendt Dieselross F 9 74
Fendt Dieselross F17 W 78
Fendt Dieselross G 25 75
Fendt F 250 GT 80
Fendt F 395 GTA Freisicht-Traktor 81
Fendt Farmer 3 S 78, 79
Fendt Farmer 304 LS 80
Fendt Farmer 305 LS 81
Fendt Farmer 308 LS 80
Fendt Farmer 312 82
Fendt Farmer 410 Vario 83
Fendt Favorit 1 77
Fendt Favorit 2 79
Fendt Favorit 930 Vario TM 5 83
Fendt Favorit Vario 714 82
Fendt Fix 2 78
Ferguson TE 20 84
Ferguson TEA 20 85
Ferguson TEF 85
Fiat 211 R 94
Fiat 215 Hi-Crop-Design 94
Fiat 221 R 93
Fiat 300 95
Fiat 540 Spezial 95
Fiat 600 92
Fiat 80 R 93
Ford 8 N 99
Ford Dexta 2000 101
Ford Super Dexta 101
Fordson Dexta 100
Fordson Dexta Schmalspur 100
Fordson E 27 N 98
Fordson F, Tractor 96
Fordson F, Road Design 97
Fordson N 98
Fordson N, Tractor 97
Fordson New Major 99
Fordson Power Major 99
Fordson Super Major 4WD 101

Güldner A 20 102
Güldner A 4 M 104
Güldner ABN 103
Güldner ADS 103
Güldner AX 104
Güldner D 28 U 103
Güldner G 40 A 104
Güldner G 60 S 105
Güldner G 75 A 105

Hanomag AR 38 ..... 108, 109
Hanomag C 224 115
Hanomag R 12 114
Hanomag R 16 A 112
Hanomag R 19 113
Hanomag R 28 A 113
Hanomag R 28 B 113
Hanomag R 324 E 114
Hanomag R 324 S 115
Hanomag R 35 A 114
Hanomag R 40 109
Hanomag R 40 B 110
Hanomag R 40 Holzgas 110
Hanomag R 435 B 115
Hanomag R 455 ATK 112

Index

Hanomag R 455 S 111
Hanomag R 460 ATK 111
Hanomag RL 20 109
Hanomag SR 45 108
Hanomag WD-Radschlepper R 26, Tractor 106
Hanomag WD-Radschlepper R 28/32, Tractor 107
Hanomag WD-Radschlepper R 28/32, Traffic Design 107
Hatz TL 12 116
Hatz TL 13 117
Hatz TL 22 117
Hela D 112 119
Hela D 117 120
Hela D 14 119
Hela D 218 120
Hela D 230 121
Hela D 40 118
Hela D 415 120
Hela D 532 121
Hela D 548 121
Holder A 10 123
Holder B 10 122
Holder B 12 123
HSCS Le Robuste R 20/22 124
HSCS Le Robuste R 30/35 125
HSCS Le Robuste R 44/48 125
Hummel DT 54 .....130, 131
Hummel T 20 131
Hürlimann 1 K 8 126
Hürlimann D 130 A 129
Hürlimann D 200 128
Hürlimann D 400 127
Hürlimann D 50 127
Hürlimann D 90 129
Hürlimann H 12 128

IH 353 149
IH 423 149
IH 433 36
IH 624 149
IH 644 35
International 10-20 Titan 138
International 10-20 Titan 137
International 8-16 136
International 8-16 Mogul 137
International Farmall F 12 140
International Farmall F 14 141
International Hydro 100 35

JCB 2140 151
JCB 3190 151
JCB 3220 150
John Deere 10-20 GP 152
John Deere 1950 160
John Deere 2450 159
John Deere 2650 160
John Deere 2850 160
John Deere 3050 162
John Deere 40 156
John Deere 4020 159
John Deere 5315 162
John Deere 5515 163
John Deere 5820 163
John Deere 6110 161
John Deere 6310 161
John Deere 6420 S 164
John Deere 6800 161
John Deere 70 157
John Deere 7920 164
John Deere 8520 165
John Deere 920 158
John Deere A 153, 154
John Deere B 153
John Deere BW 154
John Deere D 155
John Deere M 155
John Deere MT 156
John Deere-Lanz 100 157
John Deere-Lanz 200 158
John Deere-Lanz 300 158

Kramer K 12 167
Kramer K 18 166
Kramer KA 250 168
Kramer KA 330 168
Kramer KB 12 167
Kramer KL 11 168
Kramer KL 150 169
Kramer KL 400 169
Kramer Pionier S 169

Landini L 25 171
Landini Landinetta 171
Landini R 4000 171
Landini Super Velite 50/55 PS 170
Lanz 12 PS, Type HL 172
Lanz 12 PS, Type HP (Knicklenker) 173
Lanz 15/30 PS, Type HR 5, Ackerbulldog 173
Lanz 15/30 PS, Type HR 5, Moorbulldog 176
Lanz 15/30 PS, Type HR 5, Verkehrsbulldog 175
Lanz 22/28 PS, Type HR 2, Eisenbulldog 174
Lanz 22/28 PS, Type HR 2, Verkehrsbulldog 173
Lanz 22/38 PS, Type HR 5, Verkehrsbulldog 174
Lanz 22/38 PS, Type HR 6, Schwerzugbulldog 176
Lanz 22/38/44 PS, Type HR 6, Ackerbulldog 175
Lanz D 1206 193
Lanz D 1306 192
Lanz D 1616, Series HE 189
Lanz D 1666 192
Lanz D 2216, Series HE 186
Lanz D 2806, Series HE 186
Lanz D 2816, Series HE 190
Lanz D 3206, Series HN 187
Lanz D 3606 187
Lanz D 4016, Series HN 191, 192
Lanz D 5006, Series HR 187
Lanz D 5016, Series HR 188
Lanz D 6007, Series HR 188
Lanz D 6016 189
Lanz D 6516, Series HR 191
Lanz-Alldog A 1806 193
Lanz-Bulldog 30 PS, Type D 8506, Series HR 7 178
Lanz-Bulldog 35 PS, Type D 8500, Series HR 7 179
Lanz-Bulldog 35 PS, Type D 8506, Series HR 7 178
Lanz-Bulldog 35 PS, Type D 8539, Series HR 7 179
Lanz-Bulldog D 1506, Series HR 8 184
Lanz-Bulldog D 1706, Series HE 185
Lanz-Bulldog D 2539, Series HR 9 .....182, 185
Lanz-Bulldog D 7506, Series HN 3 .....177, 183
Lanz-Bulldog D 7511, Series HN 3 178
Lanz-Bulldog D 8506, Series HR 7 .....177, 180, 183, 184
Lanz-Bulldog D 9006, Reingas-Ackerluft-Bulldog 182
Lanz-Bulldog D 9506 180
Lanz-Bulldog D 9506, Series HR 8 180
Lanz-Bulldog D 9531, Series HR 8 181
Lanz-Bulldog D 9538, Series HR 8 181

MAN 2 K 3 197
MAN 2 L 3 198
MAN 4 L 2 199
MAN 4 R 1 197
MAN 4 R 3 199
MAN 4 S 2 198
MAN A 25 A 196
MAN AS 325 H 194, 195
MAN B 18 A 196
MAN B 45 A 195
MAN C 40 197
Massey-Ferguson MF 133 88
Massey-Ferguson MF 135 88
Massey-Ferguson MF 185 87
Massey-Ferguson MF 30 86
Massey-Ferguson MF 35 86
Massey-Ferguson MF 42 87
Massey-Harris 15/22 General Purpose 200
Massey-Harris 44 K 201
Massey-Harris 744 D 201
Massey-Harris 820 201
MBA SB 751 219
McCormick BWD 6 142
McCormick CX 105 203
McCormick D 215 147
McCormick D 432 148
McCormick D 514 148
McCormick F 85 202
McCormick MC 115 204
McCormick MC 135 Power 6 205
McCormick MTX 125 205
McCormick MTX 185 203
McCormick ZTX 280 204
McCormick-Deering 10-20, Tractor 139
McCormick-Deering 10-20, Tractor 140
McCormick-Deering 10-20, All purpose tractor 138
McCormick-Deering FG 144
McCormick-Deering WD 40 142
MF 2210 89
MF 4365 89
MF 5435 90
MF 5465 .....89, 90

Tractors

Like no other machines, tractors are a symbol of power and performance and are amongst the most popular commercial vehicles in the world. From the simple, ploughing tractor to the modern, high-tech tractor, from Advance-Rumely to Zettelmeyer – all the significant models and brands are described in this informative reference book. With more than 500 brilliant photographs and detailed descriptions, this book documents the development of the mechanisation of agriculture from its beginnings to the present day.

- The most important and famous tractors in the world
- The most significant producers and the most well-known brands
- Detailed information about the production era, the horsepower rating, the cubic capacity and the quantity produced

21/11741.13

ISBN 978-3-625-11741-4

© Naumann & Göbel Verlagsgesellschaft mbH
a subsidiary of VEMAG Verlags- und Medien Aktiengesellschaft
Emil-Hoffmann-Str. 1, 50996 Cologne (Germany)
www.vemag-medien.de

Author: Udo Paulitz
Translation/editing: Colin Hurst / David Price in association with First Edition Translations Ltd, Cambridge
Complete production: Naumann & Göbel Verlagsgesellschaft mbH
All rights reserved
Printed in China